This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

KC
8559
2 04

Digitized by Google

Arc 855.209 F

Harvard College Library

FROM THE BEQUEST OF

GEORGE FRANCIS PARKMAN
(Class of 1844)

OF BOSTON

A fund of $25,000, established in 1909, the income
of which is used

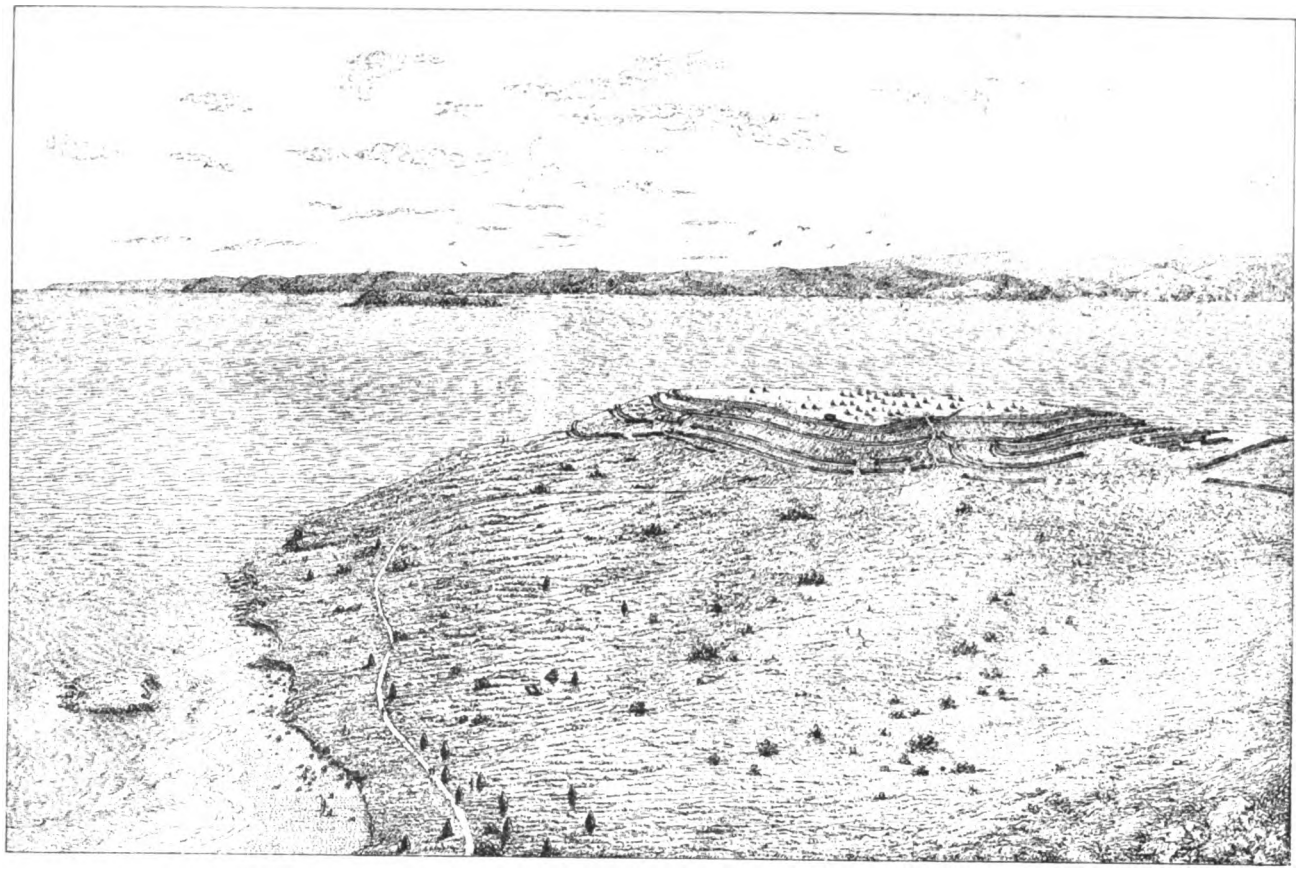
"For the purchase of books for the Library"

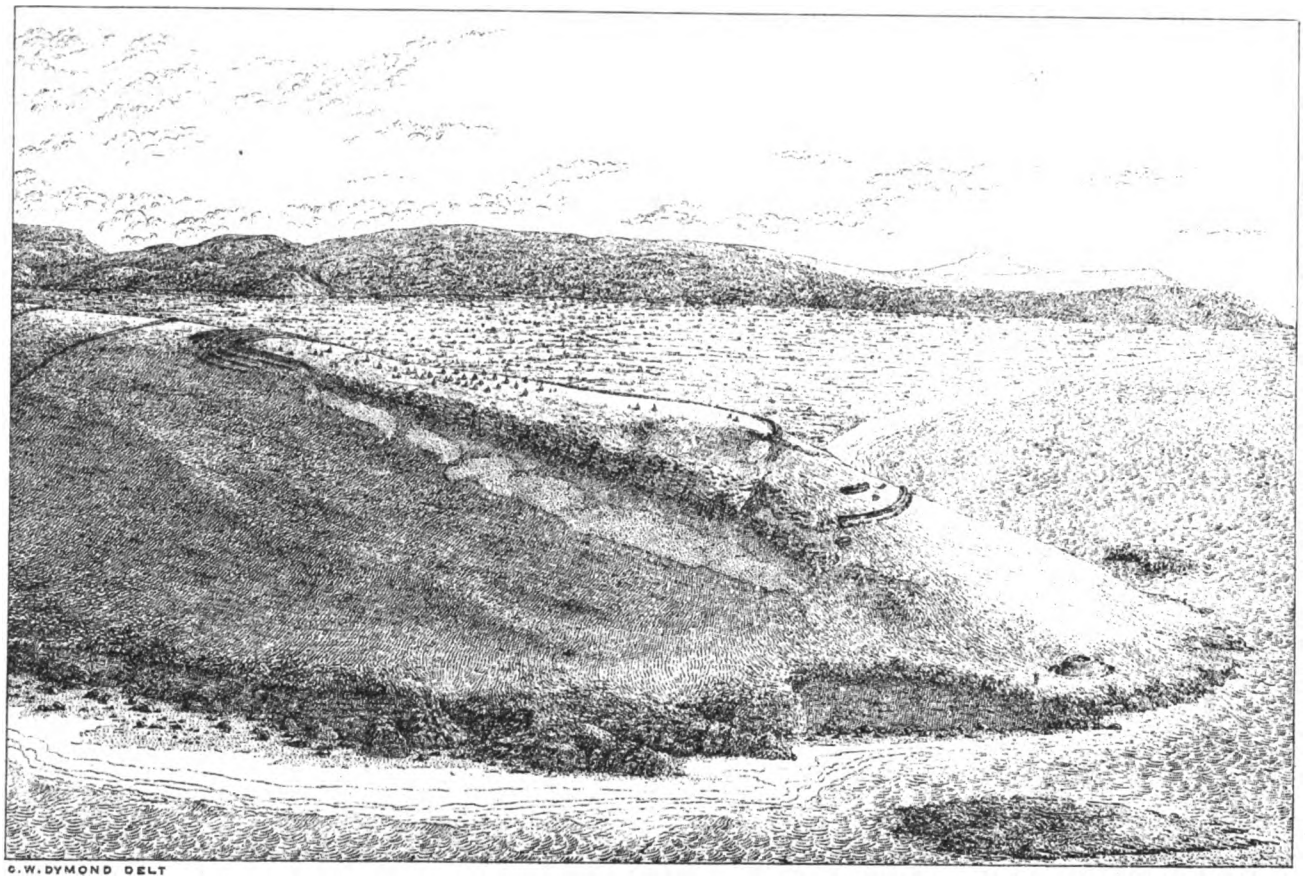
Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google





G.W. DYMOND DELT

Digitized by Google

WORLEBURY

AN

ANCIENT STRONGHOLD

IN THE COUNTY OF

SOMERSET

A NEW EDITION

REVISED AND PARTLY RE-WRITTEN WITH ADDITIONS

BY

CHARLES WILLIAM DYMOND, F.S.A.

HONORARY FELLOW OF THE SOCIETY OF ANTIQUARIES OF SCOTLAND

AND FORMERLY

MEMBER OF THE INSTITUTION OF CIVIL ENGINEERS.

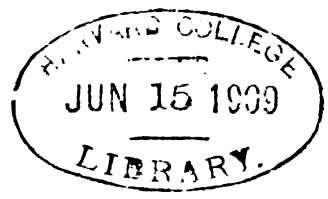
BRISTOL

W. CROFTON HEMMONS, PUBLISHER

1902

Digitized by Google

Unc 855.209 F
*



G. F. Parkman fund

The number of copies of this work printed for Subscribers is limited to 100; of which this is
No. 34

Digitized by Google

CONTENTS.

	PAGE
TITLE-PAGE	
CONTENTS	iii
INDEX	v–vi
PREFACE	vii
MEMORANDA AND CORRIGENDA	viii
CHAPTER I. Introductory: with Bibliography	1–15
„ II. Environment, Approaches, Site, Construction, Pits, Water-supply	16–49
APPENDIX TO CHAP. II. Analogues	50–73
CHAPTER III. Discoveries in the Pits, etc., and Lists of Objects found	74–82
APPENDIX TO CHAP. III. Illustrative Notes	82–86
CHAPTER IV. Historical Review	86–95
CHAPTER V. Opinions and Conclusions	96–116
DESCRIPTIVE INDEX TO THE PLATES	116–124

LIST OF PLATES.

FRONTISPIECE. Views of Worlebury	To face Title-page.	
PLATE I. Environs of Worlebury, with topographical inset-plan	„	page 1
„ II. Plan of Worlebury	„	„ 1
„ III. Index-plan	„	„ 1
„ IV. Hill-sections	„	„ 124
„ V. Structure of Walls	„	„ 124
„ VI. Ditches, Entrances, etc.	„	„ 124
„ VII. Pits	„	„ 124
„ VIII. Examples of Walling	„	„ 124
„ IX. Pottery, with iron and wooden Relics	„	„ 124
„ X. Miscellaneous Relics	„	„ 124
„ XI. Skulls	„	„ 124

Digitized by Google

INDEX.

GENERAL THEORY AND DATA.

Elements of the inquiry, 2, 3, 101, 102. *Classification of camps*, 2, 3–8, 50, 51. *Positions*, 1, 2, 3, 5, 8, 16, 49. *Uses*, 3, 4, 12, 72, 105. *Development of styles*, 4, 6, 8, 62. *Types and fashions*, 3, 4, 5, 7, 8, 28, 29, 50, 51, 102, 103, 107. *Camp-building period*, 1, 12, 104. *Life-conditions: stages of human progress*, 49, 104, 105, 106, 108, 109.

RACES AND TRIBES.

Basutos, 105. *Belgæ, Belgic-Britons*, 12, 13, 51, 87, 96, 97, 103, 106, 109, 111, 114. *Britons*, 12, 14, 29, 30, 32, 49, 50, 63, 75, 82, 83, 89, 96, 97, 98, 100, 105, 113. *Brythons (see also Britons)*, 86, 87, 111, 113. *Cangi*, 88. *Celts*, 30, 85, 87, 98, 99, 101, 113; *(dark)*, 101; *(fair)*, 101. *Cornishmen*, 109, 113. *Cymry (see Welsh)*. *Danes*, 11, 12, 15, 85, 87, 90, 91, 92, 93, 94, 105, 111, 112, 115, 116. *Devon men*, 113. *Dorset men*, 90. *East Angles*, 92. *Firbolgs*, 7, 54, 55, 96, 102, 103, 108, 109. *Gaels (see also Goidels)*, 7, 28, 87, 88, 89, 96, 101, 103, 106. *Galedin, Men of*, 51. *Gauls*, 70. *Goidels (see also Gaels)*, 86, 106, 109, 110, 111, 113, 115. *Gwyddelod*, 7, 101. *Hædui*, 11, 13, 96, 97, 103. *Iberians, Ivernians*, 101, 105, 109, 111, 113. *Irish (see also Scoti)*, 85, 88, 89. *Lloegrwys*, 51, 96. *Mandans*, 13. *Normans*, 87, 94, 111, 116. *Northmen*, 111, 112. *Northumbrians*, 92. *Phœnicians*, 12, 86, 96, 97, 103, 106. *Picts*, 111, 112. *Romans*, 8, 11, 12, 14, 15, 49, 81, 88, 96, 97, 99, 100, 101, 111, 114, 115, 121, 122. *Romano-Britons*, 89, 90, 98, 99, 100, 101, 111, 112, 122. *Saxons*, 15, 82, 85, 87, 89, 90, 93, 94, 98, 99, 100, 105, 111, 112, 113, 116, 122. *Scoti, Scots, (see also Irish)*, 88, 111, 112. *Silures*, 16. *Somerset men*, 90, 92, 113. *Tartars, Tatars*, 104. *Teutons*, 30, 87. *Veneti*, 86, 103, 108. *Wealas*, 112. *Welsh*, 8, 92, 99, 106.

WORLEBURY.

Accommodation, 12, 13, 48. *Age*, 6, 8, 11, 12, 13, 28, 29, 96, 97, 98, 99, 101–110, 115. *Aggeres, Valla*, 12, 19, 20, 21, 23, 24, 25, 29, 32, 33, 34, 36, 40, 41, 50, 118, 120. *Appendages to walls*, 26, 118, 119. *Approaches*, 18, 34. *Ared*, 11, 12, 19. *Arrangement*, 13, 19, 20, 50, 51. *Basket-work, (see Superstructures)*. *Beach-pebbles*, 43, 75, 76, 77, 78, 80, 98, 111, 113. *Beacon*, 12. *Beads*, 14, 79, 81, 82, 85, 113, 122. *Berme or bench*, 22, 25, 38, 44, 63, 119. *Bones (animal)*, 75, 76, 77, 78, 79, 80, 110, 112, 113, 122, 124; *(human)*, 14, 15, 76, 77, 78, 79, 80, 98, 99, 100, 101, 111, 112, 122, 123, 124. "*Breaches*", 13, 33, 34. *Breastworks*, 20, 23, 25, 30, 39, 40, 41, 42, 119. *Bridle-bit*, 81. *Bronze ornaments*, 14, 76, 79, 81, 82, 111, 113, 122. *Builders*, 11, 12, 13, 96–98, 102–104, 107–110, 115. *Buildings (ruined)*, 26, 46, 69. *Cattle-fold*, 13, 21, 34, 40. *Chamber (rectangular)*, 11, 12, 29, 33, 47, 67, 75, 120, 121. *Chariots*, 37. *Chemin-de-ronde and banquette*, 21, 29. *Chevaux-de-frise*, 30. *Circle (large)*, 12, 47, 76. *Cliffs*, 12, 19, 20, 35, 43, 44, 49, 50. *Coins*, 11, 14, 81, 112. *Comb*, 80, 85, 113, 122. *Conclusions, Summary of*, 115, 116. "*Cups*" *in aggeres*, 13, 30, 31, 32, 60, 61, 118, 120. *Distances*, 17, 18, 79. *Ditches*, 10, 11, 13, 20, 23, 37–41, 42, 63, 119, 120. *Embankments*, 19, 40, 46, 48. *Enceinte*, 19, 33, 34, 37, 45, 50. *Entrances*, 13, 14, 19, 33-37, 117, 118, 120. *Environment*, 18, 116, 117. *Epochs*, 15, 99, 111. *Escarpments*, 19, 34, 38. *Exploration (by Mr. Warre)*, 8, 13, 14, 37, 46; *(by Mr. Dymond)*, 9, 10, 15, 24, 37. *Flints*, 79, 80, 111, 113, 122. *Foot-paths*, 13, 33, 34, 38, 40, 117. *Fosse (transverse)*, 19, 37, 38, 50, 120. *Furciform object*, 81, 122. *Garrison*, 107. *Gateways (see Entrances)*. *Grain*, 76, 77, 78, 79, 80, 99, 100, 111, 113. *Heights*, 19, 118. *Hollows in hill*, 48. *Hut-circles and huts*, 8, 12, 13, 14, 46, 70, 75, 98, 99, 100, 116. *Hut (restored)*, 15, 70. *Inhabitants*, 98, 99, 100, 109. *Iron relics*, 76, 77, 79, 81, 82, 100, 111, 121. "*Keep*", 13, 19, 20, 22, 26, 27, 33, 34, 38, 39, 40, 41, 45, 50, 51, 117, 118, 119, 120, 121. *Knife-handle*, 80, 85, 113, 122. *Landslips*, 44. *Lead*, 81. *Lias covers*, 77, 79, 80, 99, 111. *Limpet-shells*, 80. *Macadamizing*, 23, 37, 44. *Marrow-bone*, 80, 122. *Modern interferences*, 10, 30, 32, 33, 34, 38. "*Moles*", 24. *Ochre*, 76, 77, 80, 111. *Ordnance-carn*, 32, 118. *Ornaments*, 14, 15, 76, 79, 80, 81, 82, 85, 113, 122. *Outworks*, 9, 12, 13, 15, 20, 21, 39, 40, 50, 117. *Passages*, 12, 26, 33–37, 40, 119. *Pits*, 8, 10, 12, 14, 15, 20, 38, 45–48, 69, 70, 71, 75, 98, 100, 102, 110, 120; *(number of)*, 45; *(per acre)*, 71. *Plans*, 9, 10, 12, 13, 14, 15, 19, 117. *Position*, 11, 17, 18, 19, 116, 117. *Pottery*, 14, 15, 75, 76, 79, 81, 97, 100, 111, 113, 121. *Quality of work*, 21, 27, 29. *Ramparts*, 11, 13, 15, 19, 20, 21–33, 50. *Ramps*, 22, 23, 25, 118. *Relics*, 14, 15, 75–82, 85, 97, 98, 99, 100, 111, 121, 122; *(date of)*, 13, 14, 97, 98, 99, 100. "*Retrenchment*", 33, 34. *Rings (bronze)*, 76, 81, 111, 113, 122; *(iron)*, 76, 81, 111, 121, 122. *Rubbers*, 80, 85, 113. *Sally-port*, 35. "*Scoops*", 48. *Sections of hill*, 19, 117. *Sedge-plait*, 77, 80, 111, 122. "*Sentries' shelters*", 13, 24. *Sheets of stones*, 23, 25, 36, 39, 42, 120: *(see also Talus)*. *Sieges and fall*, viii, 13, 14, 15, 88, 89, 98, 99, 100, 110, 111–116. *Sizes of stones*, 27. *Skeletons (see Bones)*. "*Slingers' platforms*", 13, 14, 15, 20, 24, 41–43, 63, 119. *Sling-stones (see Beach-pebbles)*. *Spar*, 76, 80, 111. *Springs*, 14, 35, 49. *Steened pit*, 14, 15, 46, 70, 120. *Steps*, 33, 36, 120. *Stories*, 11, 12, 15, 90, 91, 93, 94. "*Subterranean passage*", 12, 35. *Superstructures*, 29, 30, 31, 32, 48. *Surveys (by Mr. Crocker)*, 12; *(by Mr. Atkins)*, 9, 13; *(by Mr. Dymond)*, 9, 10, 15. *Talus*, 20, 43–45, 120. *Time required to build*, 106. *Tool-marks, No*, 28, 99, 102. *Tools*, 80, 81, 113, 121, 122. "*Towers*", 13, 22, 24, 25. *Views of features and relics*, 12, 14, 15, 31, 116, 120, 121, 122, 123. *Walls (structure)*, 12, 14, 15, 21, 22, 23, 24, 25, 28, 102, 118; *(terraces)*, 22, 23, 24, 25, 36, 102, 118; *(parapets)*, 22, 23, 24, 25, 30, 34, 118; *(sections)*, 12, 22, 24, 25, 118; *(height)*, 11, 22, 25, 30, 40, 118; *(thickness)*, 21, 22, 118. *Water-supply*, 12, 49. *Weapons*, 76, 77, 79, 80, 81, 82, 98, 99, 100, 111, 113, 114, 121, 122. *Whorls*, 79, 80, 81, 113, 122. *Winch-handle*, 79. *Wood (charred)*, 70, 75, 76, 77, 78, 79, 80, 98, 99, 100, 110, 111, 121.

Digitized by Google

CAMPS REFERRED-TO.

Alba-longa, 72. *Aran forts*, 28, 29, 55, 56, 62, 64, 73, 96, 102, 108. *Athens*, 72. *Banwell*, 17, 117. *Battlesbury*, 63. *Bethulia*, 72. *Braich-y-ddinas*, 54, 58, 62, 71, 72, 108. *Brean-down*, 17, 90, 116, 117. *Brent-knoll*, 17, 73, 116, 117. *Caburn*, 68, 71, 73, 85, 122. *Cadbury (Silverton)*, 51; *(Tickenham)*, 117; *(Wincanton)*, 29, 51, 63, 72, 83; *(Yatton)*, 17, 117. *Cannington*, 117. *Carn-goch*, 29, 32, 54, 58, 60, 61, 62, 65, 73. *Carthage*, 97. *Castell-caer-lleion*, 58. *Castle-an-dinas*, 51. *Castle-hill, Stowey*, 50. *Castle Kenyon*, 51. *Chastel-coz*, 47, 56, 59, 62, 64, 65–67, 71, 72, 73, 85, 108. *Chywoon-castle*, 51, 52, 57, 62, 72. *Cissbury*, 85. *Cliff-castles*, 108. *Combe-down*, 50. *Common-down*, 67, 68, 83, 84. *Craig-y-ddinas*, 55, 62, 73. *David's St. Head*, 108. *Denbury*, 51. *Dinas-dinorwig*, 6, 59, 62, 73. *Dingle forts*, 4, 29, 56, 96, 102, 108. *Dinhurst*, 117. *Din Sylwy*, 6. *Ditchen-hills*, 51. *Dolbury*, 5, 17, 21, 29, 50, 51, 52, 62, 73, 83, 104, 117, 121. *Dubh-chathair*, 8, 55. *Dún Aonghusa*, 55. *Dún-beag*, 56, 62, 73. *Dún Chonchobhair*, 56. *Dún Onacht*, 55. *Gaer-drewyn*, 54, 58, 59, 73. *Grimspound*, 57, 62, 71, 72, 73. *Hamdon*, 50, 51, 63, 73. *Hardknott*, 8, 73. *Hembury*, 51. *Lligwy*, 6. *Maiden-castle*, 68, 83. *Membury*, 50, 51. *Moel-y-gaer*, 102. *Musbury*, 50. *Neroche*, 50, 51, 62, 63, 73, 83. *Norton*, 50, 51, 73. *Old Sarum*, 38. *Orchard-castle*, 50, 51, 73. *Pen-caer-Helen*, 64. *Pentyrch*, 53, 61, 62, 73. *Pen-y-gaer*, 53, 54, 65, 73. *Porth-dinllaen*, 108. *Rowborough*, 50. *Scratchbury*, 63. *Thebes*, 72. *Thomas' St. Head*, 17, 18, 45, 62, 63, 117. *Tiryns*, 8. *Tre-'r-ceiri*, 32, 52, 53, 54, 57, 62, 64, 65, 71, 72, 73. *Treryn-dinas*, 108. *Troy*, 72. *Walton-down*, 46, 67, 83, 84, 117.

ANALOGUES.

POSITIONS. *Aran forts*, 108. *Braich-y-ddinas*, 108. *Chastel-coz*, 108. *Cliff-castles*, 108. *Dingle forts*, 108. *Dolbury*, 104.

DISPOSITION OF WORKS, 50, 51.

RAMPARTS AND WALLS, 51–57, 73. *Aran forts*, 102, 103. *Braich-y-ddinas*, 54. *Carn-goch*, 54. *Chastel-coz*, 56. *Chywoon-castle*, 51, 52. *Common-down*, 85. *Craig-y-ddinas*, 55, 73. *Dingle forts*, 102, 103. *Dolbury*, 51, 52, 121. *Dubh-chathair*, 55. *Dún Aonghusa*, 55. *Dún beag*, 56. *Dún Chonchobhair*, 56. *Dún Onacht*, 55. *Gaer-drewyn*, 54, 73. *Moel-y-gaer*, 102. *Pentyrch*, 53. *Pen-y-gaer*, 53, 73. *Saccara pyramid*, 103. *Tre-'r-ceiri*, 32, 52, 53, 54. *Walton-down*, 85. *Welsh camps*, 102, 103, 109.

ENTRANCES, 57–59. *Braich-y-ddinas*, 58. *Carn-goch*, 58. *Castell-caer-lleion*, 58. *Chastel-coz*, 59. *Chywoon-castle*, 57. *Dinas-dinorwig*, 59. *Gaer-drewyn*, 58. *Grimspound*, 57. *Tre-'r-ceiri*, 57.

STEPS, 59. *Bwlch-drws-Ardudwy*, 59. *Bwlch-tyddiad*, 59. *Kew's St. Steps*, 59.

CUP-PITTINGS IN RAMPARTS, 59-61. *Carn-goch*, 32, 60. *Gaer-drewyn*, 59. *Pentyrch (chambers)*, 61.

DITCHES, 62. *Aran forts*, 62. *Braich-y-ddinas*, 62. *Carn-goch*, 62. *Chastel-coz*, 62. *Chywoon-castle*, 62. *Craig-y-ddinas*, 62. *Dinas-dinorwig*, 62. *Dolbury*, 5, 62. *Dún beag*, 62. *Grimspound*, 62. *Old Sarum*, 38. *Pentyrch*, 62. *Tre-'r-ceiri*, 62.

"SLINGERS' PLATFORMS", 62, 63.

ESCARPED TERRACES, 63. *Battlesbury*, 63. *Cadbury (Wincanton)*, 63. *Hamdon*, 63. *Neroche*, 62, 63. *Scratchbury*, 63.

TALUS AND SHEETS OF STONES, 63-66. *Carn-goch*, 65. *Thomas' St. Head*, 45, 63. *Tre-'r-ceiri*, 64.

PITS, 65-69, 70, 71. *Aran forts*, 102. *Beckhampton*, 70, 71. *Caburn*, 68, 72. *Chastel-coz*, 65-67. *Cleeve-combe*, 68. *Common-down*, 46, 67, 68. *Dingle forts*, 102. *Kew's St. chamber*, 47, 67. *Maiden-castle*, 68. *Pen-y-gaer*, 65. *Walton-down*, 46, 67. *Welsh camps*, 109. *Wrington-common*, 68.

HUTS, 69-71. *Numbers per acre (Braich-y-ddinas, Chastel-coz, Grimspound, Tre-'r-ceiri)*, 71.

WATER-SUPPLY, 72, 73. *Alba-longa*, 72. *Aran forts*, 73. *Athens*, 72. *Bethulia*, 72. *Braich-y-ddinas*, 72. *Brent-Knoll*, 73. *Caburn*, 73. *Cadbury (Wincanton)*, 72. *Carn-goch*, 73. *Chastel-coz*, 73. *Chywoon-castle*, 72. *Dinas-dinorwig*, 73. *Dolbury*, 73. *Dún-beag*, 73. *Grimspound*, 73. *Hamdon*, 73. *Hardknott*, 73. *Neroche*, 73. *Norton*, 73. *Orchard-castle*, 73. *Pentyrch*, 73. *Thebes*, 72. *Tre-'r-ceiri*, 73. *Troy*, 72.

RELICS, 82-86. *Caburn*, 85, 113, 114, 122. *Cadbury (Wincanton)*, 83. *Chastel-coz*, 85. *Cirencester*, 122. *Cissbury*, 85, 113. *Common-down*, 83, 84. *Dolbury*, 83. *Harnham-hill*, 122. *Kew's St. chamber*, 81, 82; *Steps*, 82. *Maiden-castle*, 83. *Neroche*, 83. *Sarre*, 122. *Uriconium*, 81. *Walton-down*, 83, 84, 114. *Worle*, 82.

MISCELLANEOUS.

Adinoth, Eadnoth, 95. *Æthelm, Æthelnoth, Æthelred*, 92. *Agricultural stage*, 104, 105, 106. *Alfred*, 11, 91. *Areas (of hill)*, 17, 108; *(of camps)*, 71. *Aulus Plantius*, 114. *Avon (Som.)*, 13, 88, 90, 93, 95, 98, 117. *Axe (Som.)*, 50, 89, 103, 115. *Axium, Ad*, 13, 18, 98, 117. *Banwell*, 11. *Basuto-land*, 105. *Bath*, 89, 106. *Beaches*, 18, 116. *Bearnbeck*, 82, 116. *Beehive-huts*, 7, 8, 116. *Bitsham, Biddesham*, 90, 91, 116. *Blagdon*, 115. *Bleadon*, 90, 93, 94, 104, 116. *Boadicea*, 49. *Brean*, 95. *Brean-down*, 17, 90, 115, 116. *Brent*, 90, 93, 115, 116. *Brent-knoll*, 17, 91, 116. *Brit. Arch. Ass. visits W.*, 15. *Bronze period*, 106, 113. *Brue*, 89. *Buttington*, 91, 92. *Caer Pensauelcoit*, 115. *Cæsar's incursions*, 114. "*Cahers*", 4, 7, 29. *Calamine (pits)*, 47; *(trade)*, 106. *Caradoc*, 8. *Castiglione huts*, 15. *Ceawlin*, viii, 13, 89, 98, 99, 100, 115. *Cenwalh*, 99. *Chevaux-de-frise*, 64. *Churchill*, 11. *Cirencester*, 89.

Digitized by Google

"*Cloghauns*", 7, 70, 102. *Comail*, 89. *Combwich*, 87. *Condidan*, 89. *Congresbury*, 18, 94, 116. *Criomhthann Mac Fiodhaidh*, 88, 89, 115. *Crystal balls*, 83. *Cutiau (or Cytiau)-'r-Gwyddelod*, 7, 8. *Cyclopian masonry*, 28. *Dagger-knife*, 81, 82. *Deorham (battle of)*, 89, 115. *Devon (area of)*, 105; *(ancient population of)*, 105. *Dinn Map Lethain, Dinn-tradui*, 89. *Dip of strata*, 19. *Drogo de Montacute*, 94, 116. *Dumnonia*, 16, 50, 51, 89. *Dunball*, 79. "*Duns*", 7, 29, 52, 102. *Eadnoth*, 95. *Ealchstan, Eanulf*, 90. *Earthworks on hill*, 12, 13, 20. *Edmunds, Edwyn*, 95. *Edward the elder*, 93, 116. *Embanking levels*, 18, 107. *Farinmail*, 89. *Fibula (silver)*, 82. *Fishing-stakes*, 18. *Flat-holm*, 93, 116. *Flints*, 18. *Forests*, 105. *Galley*, 18. *Gaulish attack*, 64. *Geology of hill*, 19. *Glaisdale pits*, 68. *Glastonbury*, 88, 89, 115. *Gloucester*, 89. *Hardknott*, 8. *Hare, Mr. S. V. (coins)*, 81. *Harold's sons*, 94, 95, 116. *Hastings, Hasteinus*, 91. *Hill planted*, 26. *Hraold*, 93, 116. *Hudson's-bay territory*, 104. *Hunting stage*, 104. *Huts*, 8, 15, 70. *Hydrography of levels*, 15, 17, 18. *Ictian sea*, 89. *Ilchester*, viii, 106. *Irish inroads*, 88, 107. *Irkenfield*, 93. *Iron arrow-head*, 82. *Iron period*, 113. *Ischalis*, viii. *Kent (reclamation in)*, 107. *Kew St.*, 106. *Kew's St. Steps*, 12, 13, 14, 15, 19, 47. *Kewstoke*, 13, 19, 95. *Knightstone*, 12, 18, 116. *Lead (pig of)*, 115. *Levels*, 17, 18, 107. *Llandaff (pigsties near)*, 70. *Locking-head*, 18. *Long-barrows*, 106. *Marshes*, 17, 18, 105. *Mendip (hills)*, 106; *(mines)*, 13, 87, 89, 97, 103, 109, 115. *Museum (Taunton)*, 79, 80, 81, 82, 123; *(Weston-super-mare)*, 79, 80, 123. *Nempnett*, 106. *Neolithic stage*, 105. *Nomadic life*, 104, 105. *North-marsh*, 116. *North Wales*, 92. *Ordemus, Ordhek*, 91, 92. *Osric*, 90. *Ossification of joints*, 80. *Ostorius Scapula*, 13, 88, 98, 100, 115. *Ottar*, 93, 116. *Parret*, 13, 50, 88, 90, 92, 93, 98, 114. *Pastoral stage*, 104, 105. *Pelasgic masonry*, 28. *Pen-pits*, 68. *Perceval, Mr. S. (rubber)*, 85. *Pictish raids*, 112. *Picwinnard carn*, 12, 82. *Place-names*, 11, 12, 90, 106. *Population (at different eras)*, 105; *(of Britain)*, 105; *(of county)*, 105; *(of hill)*, 108. *Porlock*, 93. *Pottery*, 82. *Reaping-hook*, 82. *Relics on hill*, 15. *Roads*, 18, 103, 115, 117. *Selwood*, 92. *Severn, Sabrina*, 87, 88, 91, 92, 93. *Ships of Veneti*, 86. *Shore-line (ancient)*, 11, 17, 18, 117. *Somerset (area of)*, 105; *(ancient population of)*, 105; *(number of camps in)*, 16, 105. *Som. Arch. Soc. visits W.*, 12. *Spur*, 82. *Steep-holm*, 93, 116. *Stock (numbers of, per acre)*, 104, 105. *Stony Littleton*, 106. *Sussex, Roman conquest of*, 113. *Sword-handle*, 82. *Swymmer, Mr. (coins)*, 11. *Thomas St. Head*, 17, 18, 95, 117. *Thomas, Mr. T. H. (rubber)*, 80, 85. *Tin-streaming (ancient) in Cornwall*, 109. *Totnes, or Talnas, shore*, 115. *Traffic*, 12, 13, 87, 97, 103, 104, 109. *Tumuli*, 12, 20, 116, 117. *Uley-bury*, 106. *Uphill*, 18, 86, 87, 93, 94, 104, 115, 116. *Venedotia*, 103. *Vespasian*, 114, 115. *Wansdyke*, 90. *Watchet*, 87, 93. *Weston-super-mare*, 14, 15. *West Wales*, 93. *Wirhale, Wirrall*, 91, 92. *Woodspring*, 95. *Worle*, 82, 91, 94, 116. *Worle-hill*, 11, 12, 13, 17, 18, 19, 90, 97, 98, 106, 116. *Yeo*, 18.

AUTHORITIES CITED.

Akerman, Mr. J. Y., 122. *Antonine column*, 30, 70. *Atkins, Mr. E. M.*, 9, 13, 14, 19, 24, 39, 41, 42, 47, 74, 76, 77, 117, 119. *Babington, Prof. C. C.*, 4, 5, 6, 55, 59, 64, 96. *Barnwell, Rev. E. L.*, 52, 53, 55, 57, 58, 59, 64, 65, 73, 96. *Barrett, Mr. W.*, 11, 90, 93. *Bennett, Rev. J. A.*, 95. *Betham, Sir W.*, 103. *Bloxam, Mr. M. H.*, 12, 24, 27, 46, 69, 71, 74, 75, 100, 118. *Borlase, Dr.*, 52. *Brent, Mr. J. (Sarre)*, 122. *Brice, Mr.*, 69. *Buckman, Prof., and Newmarch, Mr. C. H.*, 122. *Cæsar, Julius*, 105, 108, 113. *Camden*, 11, 19, 88. *Catlin*, 13. *Christison, Dr. D.*, 53. *Collinson, Rev. J.*, 11, 88, 94, 97. *Cormac*, 88, 89. *Cunnington, Mr.*, 70, 71. *Dawkins, Prof. W. B.*, 106, 113. *Dion Cassius*, 17, 49. *Domesday-book*, 87, 94, 95, 105. *Donovan, Dr. O'*, 55, 88, 89. *Dymond, Mr. C. W.*, 9, 10, 14, 15, 18, 29, 52, 60, 61, 79, 92, 106, 107. *Edmonds, Mr. R.*, 57. *Evans, Sir J.*, 113. *Ffoulkes, Mr. W. Wynn*, 102. *Florence of Worcester*, 93. *Fox, Maj.-Gen. A. Lane*, 68, 85, 113, 122. *Franks, Sir A. W.*, 122. *Freeman, Dr. E. A.*, 89, 94, 95. *Gell, Sir W.*, 9, 28, 72. *Geoffrey of Monmouth*, 115. *Gibson, Bishop*, 88. *Gough*, 11, 19. *Guest, Dr. E.*, 89. *Hearne*, 91, 94. *Henry of Huntington*, 91. *Hills, Mr. G. M.*, viii. *Hoare, Sir R. C.*, 18, 97, 121. *Imperial Gazetteer*, 93. *Irish Annals*, 7, 88, 102. *Jackson, Rev. W.*, 14, 21, 22, 24, 28, 29, 30, 31, 32, 34, 40, 42, 45, 46, 47, 48, 49, 62, 70, 79, 80, 81, 82, 96, 98, 99, 106. *Jay, or Gibbons*, 91, 92, 93. *Judith, Book of*, 72. *King*, 12, 70. *Langtoft's Chronicle*, 11, 91, 95. *Long, Mr. W.*, 46, 67, 68, 83, 91, 97, 103, 104. *Macalister, Prof. A.*, 100, 101, 114, 123, 124. *Matthew of Westminster*, 91. *Men, Mons. R. F. le*, 56, 59, 64, 65, 66, 85. *Mitchell, Sir A.*, 79. *Moggridge, Mr. M. and Jones, Rev. H. L.*, 32, 54, 58, 60. *Nicholls, Mr. J. F.*, 15. *Nicholls, Mr. J. F. and Taylor, Mr. J.*, 15, 99. *Niebuhr*, 97. *Norden*, 106. *Noyer, Mr. G. V. du*, 56. *Ogilvie's English Dictionary*, 122. *Ormerod, Dr.*, 92. *Parry, Mr. J.*, 65. *Phelps, Rev. W.*, 12, 97. *Pitt-Rivers, Lieut.-Gen.*, 90. *(See also Fox, Maj.-Gen. A. L.)* *Poole, Mr. E. Y.*, 15, 117. *Poole, Mr. F.*, 27. *Prichard, Rev. H.*, viii., 41, 53, 54, 58, 59, 65, 73, 96. *Pring, Dr. J. H.*, 74. *Pritchard, Mr. J. E.*, 81. *Ptolemy*, viii., 106. *Rhys, Prof. J.*, 52, 88, 103, 113. "*Richard of Cirencester*", 97. *Rutter, Mr. J.*, 11, 20, 35, 47, 48, 90, 91, 93, 94, 96. *Sammes, Aylett*, 103. *Saxon Chronicle*, 12, 90, 92, 93, 114. *Scarth, Rev. H. M.*, 15, 67. *Schoolcraft, Mr. H. R.*, 104. *Seyer, Rev. S.*, 11, 12, 90, 91, 96, 97. *Smirke, Mr. E.*, 88. *Stevens, Mr. E. T.*, 38, 71. *Stokes, Dr.*, 88, 89. *Strabo*, 70. *Stukeley*, 83. *Tacitus*, 88. *Taylor, Rev. Isaac*, 104. *Thomson, Dr. W. M.*, 122. *Thurnam, Dr.*, 100, 121. *Tomkins, Dr.*, 74, 76, 77, 78, 98, 99, 121. *Tomkins, Rev. H. G.*, 9, 15, 22, 74, 78, 99, 100, 118, 121, 122. *Tomkins, Rev. W. S.*, 22, 118. *Warre, Rev. F.*, 4, 13, 14, 23, 24, 25, 31, 33, 40, 46, 47, 48, 50, 51, 62, 63, 65, 74, 75, 78, 79, 82, 83, 88, 90, 94, 96, 97, 98, 99, 100, 106, 111, 117, 118, 121, 122. *Welsh Poem*, 8. *Welsh tradition*, 7, 88, 103, 109, 110. *Welsh Triads*, 13, 51. *Wilkinson, Sir J. G.*, 14, 29, 97. *Williams, Rev. W. Wynn*, 53, 61. *Worth, Mr. R. N.*, 105, 107, 109. *Wright, Mr. T.*, 81, 103.

Digitized by Google

PREFACE.

THE monograph, of which this is a new edition under the same title, was issued to Subscribers, in the year 1886, by its Authors, Mr. C. W. Dymond, F.S.A., M. Inst. C.E., and the Rev. H. G. Tomkins. The small impression being soon exhausted, copies became very scarce; and a regret that they were not more readily to be obtained has often been expressed. This induced the present Publisher, with the conditional sanction of the Authors, to undertake the responsibility of re-printing the volume.

In view of the labour involved in again passing it through the press, Mr. Tomkins, whose time and interests were otherwise engaged, willingly consented to leave his former colleague free to proceed in the matter alone; to alter, at his discretion, the contents of the book; and to produce it, in its new form, under his own name.

He has gladly seized this opportunity of satisfying a cherished wish to render the work more worthy of the favour with which it has been regarded. While the greater portion of the original text has virtually been reproduced, it has undergone a searching literary revision; several passages relating to obscure questions have been re-cast; a considerable number of sections and details which, from various causes, were misplaced, are now to be found in their proper positions; a new third chapter, fuller of facts, arranged in a form more convenient for reference, is substituted for the original one, of six pages, which was Mr. Tomkins' only literary contribution; and, finally, as it was felt by Mr. Dymond that the questions concerning the origin, motive and fate of Worlebury deserved much fuller treatment than had before been accorded to them, he has written an additional chapter devoted to a discussion of these themes.

The new matter, thus introduced, involved a large addition to the number of entries in the Index, which, it is believed, contains every item of sufficient importance to claim a place therein. To have burdened it with a multitude of merely nominal references, would have made it unwieldy, without adding to its usefulness.

It will be noticed that certain Celtic and other proper-names, place-names and descriptive words, in the following pages, are variously spelled. In quoted passages, the forms favoured by their writers have been retained: but, when liberty was not so restricted, and where there was room for correction, it has generally been applied;—except in the case of a few Irish words which, if treated after this manner, would have been so disguised as to escape recognition by many an English reader. These, accordingly, appear in the conventional, semi-phonetic forms which use has made familiar.

The paragraphs, or, occasionally, the sub-sections, have again been numbered, to facilitate cross-referencing.

All date-references now read back from 1899, 1900, instead of, as before, from 1885.

The reader is recommended not to overlook the "Memoranda" and "Corrigenda" on page viii.

High Wray, Ambleside, Christmas, 1901.

Digitized by Google

MEMORANDA.

Pages 52, 53, 54, 55.—Paragraphs 7, 10, 13 and 15 of the Appendix to Chap. II, copied from the corresponding sections in the first edition, were printed before the results of Mr. Prichard's later investigations became known to the author. They should now be read in connexion with the added paragraph, 52, page 73.

Page 106, line 8.—A proposal of Mr. Gordon M. Hills (*Journ. Brit. Arch. Ass.*, Vol. 34, pp. 289, 290) to identify Worlebury, instead of Ilchester, with the *Ischalis* of Ptolemy, rests solely on the discovery that "the most stupendous example of ancient British architecture in existence" occupies a position closely agreeing with that fixed by the geographer for the Belgic town. In this instance, however, he relied too much upon the accuracy of a work abounding in serious errors; and overlooked the decisive fact that no indications of an important Romano-British site are visible, or have been found, in, or anywhere near, Worlebury.

Page 114, line 12.—Among such conditions may perhaps be reckoned those under which the coins found by Mr. S. V. Hare (see p. 81) were apparently deposited and preserved. The circumstances seem to justify the conclusion that they were hidden or lost in a heap of *débris*, derived from the then ruined walls. If so, it furnishes another reason for rejecting the theory of an assault by Ceawlin, which implies that the camp remained in a defensible state for nearly two centuries longer.

Page 114, last 2 lines; page 115, line 10.—The ancient records of this campaign, which describe only those earlier operations conducted in the south-eastern parts of Britain, and in districts north of the Thames, leave it to be inferred that the large area which lay west and south of them was the scene of most of the following struggles; and, as Worlebury is at the extreme western limit of that territory, it is most likely that its overthrow occurred relatively late in the series. On this assumption, the approximate date which has been provisionally named, may perhaps be sufficiently near to the truth.

CORRIGENDA.

Page 7, line 17.—*For the dictionary-meaning* savages or Irishmen *read, preferably*, sylvan men; conventionally Irishmen

Page 50, note 1, reference; page 51, reference *; page 62, reference ‡; page 83, reference ‡.—*For* 1855 *read* 1854

Page 71, note 11, line 1.—*For* pits *read* huts

Page 82, reference *.—*For* 1854 *read* 1853

Page 89, note 11, line 3.—*For* Irish names *read, preferably*, names of Irish type

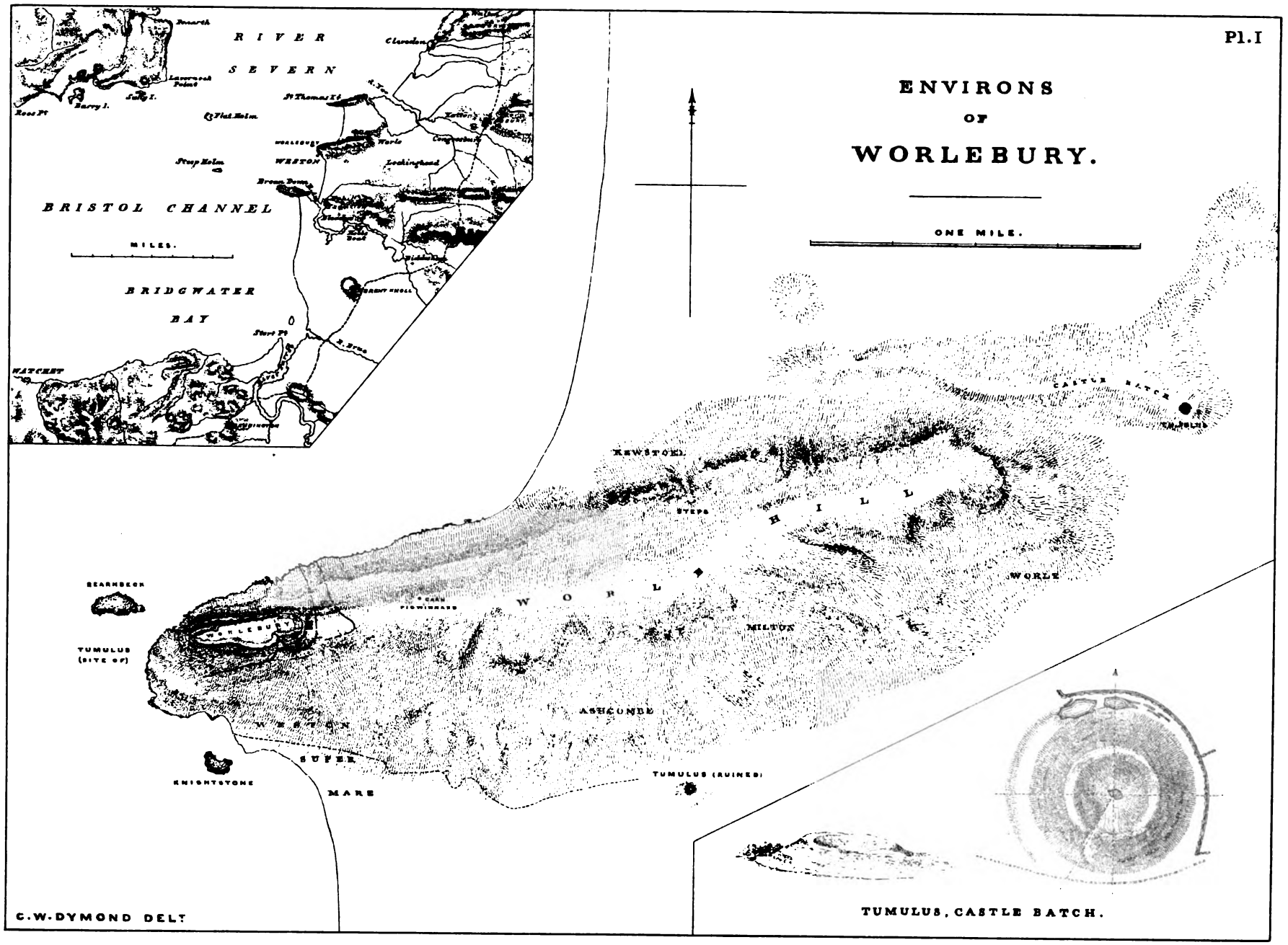
Page 98, note 1, reference.—*For* 1853 *read* 1852

Page 105, last par. of note 8, line 8 from end.—*For* (as we are told *read* (as we are told)

Page 123, col. 1, line 9 from bot.—*For* had *read* has

Digitized by Google

Digitized by Google


Pl. I
ENVIRONS
OF
WORLEBURY.
ONE MILE.
RIVER
SEVERN
BRISTOL CHANNEL
MILES.
BRIDGWATER
BAY
WESTON
Clevedon
Portishead
Flat Holm
Steep Holm
Brean Down
Burnham
Berrow
Uphill
Weston Super Mare
Worle
Kewstoke
Wrington
Congresbury
Lockinghead
Barry I.
Sully I.
Rose Pt
Sand Pt
Sand Bay
Sand Point
Worlebury
Steps
Hill
Worle
Milton
Ashcombe
Tumulus (ruins)
Tumulus (site of)
Searnbeck
Knightstone
Super
Mare
Castle Batch
Tumulus, Castle Batch.
C.W. DYMOND DELT

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

CHAPTER I.

INTRODUCTORY.

1. BY the general consent of all competent antiquaries who have seen Worlebury, that ancient stronghold—the subject of the following pages—has been classed among the most interesting and instructive of those primitive fortresses whose ruins crown the heights and break the sky-line of the uplands of our country.

2. In olden days, whenever the need for a place of defence arose, a suitable position, adapted to the habits of early warfare, could generally be found in the locality. That this need was often felt, is evident from the great number of such works that, at various dates, were constructed. They speak of troublous times, of a chronic condition of apprehension and unrest, lasting, evidently, through long ages, during which it may almost be said that "every man's hand was against his neighbour;" and when it was

> "The good old way—the simple plan—
> That they may take who have the power;
> And they may keep who can."

3. Of the events which occurred in those early periods, for the most part, history has nothing to tell us: their record was but "writ in the dust"; and has been irrecoverably lost. Until we reach the Roman era, all seems either utterly dark, or merely mythic, or, at best, traditional. Even in the narratives which the classic writers have left us, descriptive of the incidents of that foreign occupation, there is such penury of details, and the topographical elements are often of such uncertain determination, that they still furnish matter for warm antiquarian controversy. And this is even more true of somewhat later accounts, which are so exceedingly bald that, in hardly a single instance do they enable us clearly to establish the connexion of any of these hill-fortresses with events recorded in the chronicles, or embalmed in the legends that have been bequeathed to us. Most of them must have had their strength rudely tested by the practical arbitrament of war: and, certainly, it was not an uncommon fate to fall

Digitized by Google

successively under the dominion of different masters; and to be occupied, during a long course of generations, by various tribes, of divers races. Seldom, indeed, do we know this from the records of the written page. Occasionally, the evidence is found upon the surface; as when a Roman camp has been superadded to one of earlier date. But, otherwise, we may question in vain these mute custodians of secrets of the past: they speak not,—until the accidental passage of the ploughshare, or the deliberate delving of the antiquary's spade, forces them to disclose their hidden testimonies.

4. Instructive as it is to read this buried book of the acts of some of the ancient occupiers of the soil of Britain, the chief interest of its perusal, to an antiquary, usually centres in the attempt to decipher its earliest pages. By whom was the spot first fortified? Against whose attacks was the defence originally directed? And what were the conditions dictating the dimensions, design, and mode of construction of the strong place?

5. In the absence of direct evidence, (which is very seldom obtainable), our only hope of answering these queries lies in our being able, *first*, to establish a correlation of the characteristics of the executed work with the ascertained idiosyncrasies and habitudes of a certain people; and, *second*, to trace a past connexion of this people with the locality. The data required for the solution of one of these problems are, for the most part, not of the same kind as those which are involved in the solution of the other. The former question is the more practical; exercising chiefly a cultivated faculty of observation of common facts on the spot. The latter is the more speculative; appealing rather to the erudition of the scholar in his study. *This* has received, and still receives, such full and learned consideration, that there is no need to enlarge upon it here. *That*, not having, in all its branches, had its due share of skilled attention, seems susceptible of farther development.

6. The elements involved in this branch of the inquiry may be grouped under these three general heads:—

1. The actual and relative positions; and the arrangements, materials, and modes of construction of the defensive works.
2. The utensils, implements, weapons, ornaments or treasures discovered within their precincts.
3. The human skeletons, and bones of domesticated animals, which may be exhumed.

7 The evidence afforded by facts coming under the second and third of these heads, (though of a kind now comparatively well understood, and, so far as it goes, satisfactory in its indications of occupation at some one time, or at various periods), does not necessarily throw any light upon the origin of the works, in or near which the relics may be found: and, as this is the only point in reference to which any great difficulty usually occurs, the discussion will now be confined to that part of the question.

Digitized by Google

8. On consideration, it would appear that the actual position of a camp, being dictated solely by external, and, sometimes, by temporary circumstances, cannot, *per se*, give any indication as to the people who threw it up. With the addition, however, of other data, it may prove a valuable link in a chain of evidence. But a comparison of the relative positions and forms of the military works in a district may at least stimulate speculation, even if it should not suffice to lead to a settled conclusion. It may suggest the following queries, among others bearing on the question:—Who were the founders? Were they a small, weak and isolated tribe? Or did they belong to one whose influence dominated a wide area? Were their habits settled or restless, peaceable or warlike, pastoral or commercial? Were they landsmen or seafarers? Whoever they may have been, it is instinctively felt that their work should carry some corresponding indications: and, naturally, the endeavours of the student, in this branch of the inquiry, will be directed mainly toward the detection of clearly marked peculiarities. In seeking, however, to differentiate one example from another, he will very soon discover that these peculiarities are not by any means due only to inherent preferences, or to the needs created by fixed habits of life. Generally, to even a greater degree, they will be found to have been dictated by circumstances of place or time: and, in the study of each particular case, his first endeavour should be to ascertain the force of this latter local, temporary or accidental element; after evaluation and elimination of which, he may, with probability, attribute the unexplained residue to that which, by a slight modification of a recognised term, may be called the *tribal equation*.

9. From this general introductory statement, we may proceed thus to subdivide the elements comprised in the remaining clause of the first heading under paragraph 6: and this will serve as an index to the remarks which follow.

1. *Use.*—(a) Permanent residence *(oppida)*: (b) Secure retreat (hill-fortresses, citadels, forts): (c) Temporary shelter (slight and open earthworks).
2. *Size.*—(a) *Oppida*: (b) Hill-fortresses: (c) Forts, citadels and shelter-works.
3. *Form and arrangement.*—(a) Regular (circular or oval, and square or oblong): (b) Irregular (simple or undivided, and compound or divided): (c) Anomalous (cliff-castles, &c.).
4. *Ditches.*—(a) Intrenched: (b) Unintrenched.
5. *Materials.*—(a) Earth: (b) Earth mixed with stones: (c) Earth faced with stone-work: (d) Stone.
6. *Construction.*—(a) Revêted embankments: (b) Simple unbonded or bonded walls: (c) Compound unbonded or bonded walls: (d) Chambered walls: (e) Towers and stairs.

10. With respect to 1 (a), it is clear that the fact of a camp having been adapted for use, and, therefore, having probably been used for permanent residence, as a fortified town, implies that it was held by a somewhat civilized people, firmly established in the

Digitized by Google

district, during their tenure of which they could not fail to have made and left many lasting marks of their occupation, both on and below the surface of the soil. In the cases under 1 (b), we may have nearly the same state of things, in an inferior degree; and one, probably, much more prevalent in early times in these islands. It must be evident that in such permanent works alone are we likely to find those marked characteristics which, if we knew more about them, might enable us to trace their origin. The temporary ones, 1 (c), are, of course, comparatively featureless, bearing few, if any, chronological marks: hence, they are of little evidential value; and may belong to very late, as well as to very early times.

11. Next:—in point of size, the more permanent and important fortifications are usually, though by no means always, those that are among the largest. There are some striking exceptions: *e.g.*, the impregnable "cahers" of Kerry, if estimated only by the space of ground which they cover, would sink into insignificance. On the other hand, there are many earthworks of considerable amplitude which, nevertheless, could never have been intended to resist a vigorous and sustained assault.

12. When we come to consider, under the third head, the form and arrangement of a camp, we immediately enter upon a topic fruitful of controversy. In another place* reference is made to an opinion, frequently expressed, of the late Rev. Francis Warre, that the camps in Somerset may be separated into two classes which, with some confidence, may be attributed to two distinct races—the indigenous dwellers in that region, and those who supplanted them in their possessions, "in the dim backward and abysm of time." A kindred view (but expressed in general terms, and, apparently, referring rather to diversities of structure than of plan) seems to have been held by the late Professor C. C. Babington, who has thus concisely stated it:†—"If we look carefully at the works themselves, we shall see that they shew several different modes of construction; and as these differences are very marked, we are led to believe that their builders did not belong to the same race, or were all in a similar state of civilisation: in short, that each successive race of men which inhabited the country had its own mode of entrenchment and fortification. The remains seem to shew that each succeeding race was more advanced in civilisation than its predecessor. This accords with what we learn from a study of the weapons, tools, ornaments and fictile vessels, which have been obtained by excavations."

13. Commenting, *in loco*,‡ upon Mr. Warre's classification, evidence is adduced, drawn from the district to which he referred, and from the farther West, sufficient, I think, to show that his particular theory was not well founded. But, inasmuch as it involves a sweeping speculation, similar to that which is suggested in the passage

* Appendix to Chap. II, 2. † *Archæologia Cambrensis*, 1881, fourth series, Vol. XII, p. 340 ‡ Appendix to Chap II, 3.

Digitized by Google

quoted above, it may be well, in this place, to enlarge a little upon its general aspects. As to our present point,—the forms and arrangement of camps,—it was the opinion of these authorities that their marked differences are ultimately to be attributed to racial differences of mental habit. Professor Babington was not prepared to go farther than this: and it is easy to agree with him in saying,*—"Of course we make no attempt to appropriate each type of works to any special race; for we have as yet no proper means of doing so." Putting aside, then, all special attributions; and limiting our inquiries to the simple question,—How far may this distinction of types be due to deliberate preference?—strong reasons are discovered for thinking that there is much danger of laying undue stress upon this influence; for, in nearly all the examples which have come under my notice, (and they are very many), the plans of such works have almost solely been determined by the contours of the sites. Is the ground flat, or gently rounded, or conoidal? There the intrenchments are almost sure to be circular or oval.[1] Is the site broken, narrow and unsymmetrical? There, of necessity, will the intrenchments assume corresponding irregular forms, lending themselves easily to subdivision, or to the accretion of *annexes* and outworks. Having regard to the migrations which, there is reason to believe, were made by almost all the races that have successively dwelt in our land,—if the theory in question be true, might we not expect to be able to trace the places of their sojourn by their characteristic military remains, in the same way that, with some degree of probability, they have been traced by lingual deposits, or by rude monumental erections? I am not aware that any worthy attempt to do this has ever been made: but, in its successful prosecution, we should learn how far this theory is able to pass the ordeal of a systematic and searching inquiry.

14. Concerning the fourth head,—ditches,—there is much difficulty in framing any explanatory hypothesis. In earthworks, almost of necessity, the bank implies the ditch. In more artful structures, the omission of ditches may be regarded as exceptional; and, within the limits of the areas occupied by our examples, they are found lacking chiefly in the purely stone-built fortresses and forts of Wales and Cornwall. All of these, however, are not so distinguished; and those who think that they are to be attributed to the people who built Worlebury and Dolbury may find some difficulty in explaining why these are intrenched, and those not. On another page† will be found a statement of the only reasons that have suggested themselves: but it must be confessed that they are not altogether decisive, because the co-existence of both methods, in connexion with different fortified places in the same district, and on the same geological formation, is not always accounted for by them.

---

1 Of course the Roman manner entirely squares with the theory we are discussing.

* *Arch. Camb.*, 1881, fourth series, Vol. XII, p. 341. † Appendix to Chap. II, 34.

Digitized by Google

15. Proceeding to the more detailed matters involved in the fifth and sixth heads of our classification, and taking them together, it is plain that simple earthworks, which Professor Babington calls* "camps of the *first period*," might, from their nature, have been thrown up in any age, on suitable sites, for a variety of purposes. It is but a step to embankments of earth commingled with stone; but, when we find revêted *valla*, which Professor Babington designates† as of "the *second class*," the advance in construction is remarkable. Yet, that it distinctly indicates a corresponding advance in civilization, there is grave reason for doubting. Such works could be executed only in localities furnishing an abundance of stratified or semi-stratified rock: and there alone, accordingly, they are found. The examples which Professor Babington adduces‡ from Din Sylwy and Lligwy, in Anglesey, are of the bolder order; while Dinas Dinorwig seems to be more akin to the style prevailing on Dartmoor, and on the Cornish hills, where, as in Wales, inclosures of this class are interspersed with others of the class presently to be considered;[2] and, in some cases, both styles of building are exemplified in the same structure. It may here be added that, in western Devon, and in some parts of Cornwall, the hedge-rows are still commonly formed after this very type; and much of the modern work can be distinguished from the similar military remains of a past age only by its position and purpose.

16. Professor Babington places§ in "the *third class*" all those camps the ramparts of which are faced with dry rubble-stone walling, such as that at Worlebury. He regards these as showing "a further decided advance in constructive power;"‖ and, hence, it may be inferred that he would attribute them to a later and more civilized people than those who reared Din Sylwy. It may be so, if it is a mark of advancement to build structures of increased complexity: but, if we consider the relative mechanical skill that would be called forth in the two cases, I think it will be granted by those who have seen specimens of them,—at least, by those who themselves have executed, or have witnessed the erection of similar works,—that to transport, and place in line, the ponderous revêtements of the second class,—rude though they may be,—would demand the exercise of much higher executive powers than would be requisite for building even the heavier examples of walling of the third class. The ruling condition of the fashion of these latter structures will, doubtless, in every case, be found to be that, while there was a dearth of large slabs, there was found at hand an abundance of stone which could be lifted by the strength of one or two men into any position within reach of the arm. If remains of the Din Sylwy class were found on sites which did

---

[2] This fact does not affect our argument; because localities which would furnish slabs suitable for the former class would be sure to furnish also an abundance of rubble suitable for the latter.

* *Arch. Camb.*, 1881, fourth series, Vol. XII, p. 341. † *Ibid.*, p. 341. ‡ *Ibid.*, pp. 342, 343. § *Ibid.*, p. 343.
‖ *Ibid.*, p. 343.

Digitized by Google

not supply the necessary massive materials; if those of the Worlebury class were mingled with earthworks, at a distance from stone-bearing districts; or, thirdly, if simple earthworks crowned hills whose flanks were covered with good walling-stone; then, perforce, we should have to seek, in some racial preference, the motive for such singular anomalies. But when we find that, nearly everywhere, the local resources are used in the most natural and rational way, we must needs conclude that there is yet but very little evidence indeed that the methods of different races, in providing themselves with means of shelter and defence, were characterized by *persistence* of styles. The word *persistence* is emphasized, because the right view of the question seems to turn upon this point. Our knowledge—small as it is—of most of the primitive peoples who have swept over, or settled in these islands, is usually limited to the names they bore, and the lives they led in certain specified districts. Only a dim light has yet been shed upon their migrations, raids, evictions, and other movements which resulted in their establishment, for a time, in new localities where they must often have been known under different names, and been forced, by stress of new environment, to modify many of their habits. Take, for example, the race known to Welsh tradition as the *Gwyddelod*, (savages or Irishmen), to whom the *cuttiau*, or stone-built bee-hive dwellings, are attributed. What was their proper designation in that other country, from whence they came, and whither, apparently, they were eventually compelled to return? Did they continue to build the same kind of *cuttiau* there? If so, where are the remains? Are they known to us under other appellations also, and credited with other kinds of works, characterized as of other places and other times? Or did they at once cross the island, and perpetuate the racial custom by erecting "cloghauns" on its remoter shores? And before the Firbolgs of the early Irish chronicles established themselves on the Atlantic coasts and islands, (where it is supposed they built those massive chambered and terraced "duns" and "cahers" which still excite our admiration),—in what region did they sojourn? In what sort of houses did they live? And what was the form of their military structures? We speak of Firbolgic work, Gaelic work, and so on; and assume that certain fixed characteristics of style marked the Firbolg and the Gael, under all circumstances;—as though the tribal equation were the governing thing, having everywhere scope to manifest itself, instead of being (as it really must have been) merely a secondary, and, to some extent, a transient influence, ever subject to be modified and re-moulded by changing conditions, even to the point of being reduced to zero, when these might become altogether unfavourable to its exercise.

17. The true statement of the case, then, would appear to be something like this:—that fashions of building were,—as they still, to some extent, are,—in the main, local; and tribal only to the degree that, while denizens of any given district, the style of a people's works, broadly moulded by the *genius loci*, might retain, for a time, some impress of immediately preceding and familiar habits.

Digitized by Google

18 To illustrate the point, that fashions change with changing conditions, it may suffice to cite a statement made in a Welsh poem, (respecting the authority of which, however, there is some diversity of opinion), to the effect that, "in the time of Caradoc, the Welsh cut down all their great forests in order to render their country less tenable to the invading Romans; and, as they had hitherto constructed their houses of wood, when this timber failed them they adopted the Irish form of stone houses, that of the beehive, constructed of dry masonry, a mode of building hitherto unknown in Wales."*

19. It may, however, be said—and with much propriety—that every strongly marked people, has, and exhibits, affinities for certain geological formations; and, in all its wanderings, would naturally seek to satisfy the hereditary preferences. To such a degree we may safely admit into the question a tendency to continuity of racial taste. But, after allowing due weight to this, it still seems as though the main contention rests undisturbed.

20. The conclusion, then, to be drawn from the foregoing considerations is, that the only points in the arrangement and construction of a camp, or any similar work, which can be regarded as bearing any special ethnic significance, are such as form *distinct peculiarities, not explicable by the conditions of the site.* The evidence is strong in proportion as those peculiarities are pronounced, and are repeated in different works in the same district, or in districts not too widely separated.

21. The case may be thus summed up.—As a general rule, it is evident that the plans of primitive works of defence were very largely regulated by, and adapted to the physical circumstances of their sites; and the character of their structure was fixed by the nature of the materials at hand: and, though, no doubt, there were differences of fashion among different races, arising from their various needs, habits and pursuits, I am convinced that these were not always sufficiently marked—and our knowledge of them is far too slender—to make it at present possible to accept either the special attribution proposed by Mr. Warre, or any other more general attempt at classification in which the element of local conditions does not hold a ruling place.

22. Hence, it must be concluded that the doctrine of a progressive development, based upon the distinctive differences of these works, cannot, without very large allowances, be sustained. Were it absolutely true, we should have to regard the Argolic Tiryns as of far later date than Worlebury; and the Roman *castrum* on Hardknott, in Cumberland, would be many centuries earlier than Dubh-chathair, in Aran.

---

23. In the years 1851, 2, the late Rev. Francis Warre, assisted by three or four friends, conducted an exploration of the pits[3] in Worlebury; and, incidentally, at one point, made a

---

3 Frequently, but erroneously, confounded with and called "hut-circles" by Mr. Warre and others. Hut-circles are the remains of the foundation-walls of ancient circular dwellings, or shelters, on the surface of the ground. They are very seldom associated with

* *Archæological Journal*, 1858, Vol. XV, p. 22: also 1867, Vol. XXIV, p. 230.

Digitized by Google

slight examination of a portion of the ruined walls. At the same time, the late Mr. Edwin Martin Atkins[4] surveyed the camp, and made an outline-plan of it, which has been published. The thanks of antiquaries are due to him for this timely work, which is now the only record we possess of those larger portions of the ancient outer defences which have since been destroyed by the "intakes" of modern Weston.

24. Here rested the first attempt to examine Worlebury,—till then but little known, though close to one of the most frequented of English watering-places: and, for more than twenty-five years, nothing farther appears to have been done: but the attention of antiquaries continued to be drawn to the subject; and, by delivery of lectures, and other means, public interest in it was occasionally revived.

25. In the spring of 1878, when examining some of the wall-sections, the auther found that the principal faces, instead of being footed, as had generally been supposed, on the tops of the lower stages, were independently carried up from the ground. At the same time, he also surveyed, with some care, certain portions of the walls, in order to test the validity of Mr. Warre's views regarding their structural system. The results were communicated to the British Archæological Association in a memorandum, read at one of its meetings; the publication of which, by request, was withheld. They were such as to suggest farther inquiry; and, on more closely looking into the matter, it was discovered that many accepted notions were, to an unsuspected degree, based upon erroneous data. It became clear that observation had been superficial, and that unregulated imagination (that bane of archæological research) had often been allowed to out-run the judgment. It still remains, as in the time when Sir William Gell wrote*:—"The truth is, that besides the habit of speaking carelessly, few are in the practice of examining minutely:" and the consequence has been, that certain assertions and speculations, injurious to the study of comparative archæology, because untrue, have become regarded as authoritative, and popularly accepted, while the means of checking them have been gradually passing away.

26. Having, for many years, lived under the shadow of Worlebury, the author had long been familiar with its outward features. On conferring with the Rev. H. G. Tomkins, who had witnessed much of Mr. Warre's exploratory work at the camp, and who wrote the short chapter on the pits which appeared in the first edition of this monograph, it was found that both held similar views on some controvertible points; and it became abundantly evident

---

pits sunk in the area. Such hut-circles may have existed around the pits at Worlebury: but much confusion has been caused by not distinguishing the one from the other.

4 Of Kingston Lisle, Berks,—a man universally respected; the "squire" of Mr. Tom Hughes' delightful story, "The Scouring of the White Horse." Stimulated by the work at Worlebury, in which he assisted, he became, and continued to be, a zealous antiquary: and, after its completion, he opened a large number of barrows on the historic ground of Ashdown, the scene of the great victory of Ethelred and Alfred, near his own home. So good an example deserves to be generally followed by other men of leisure and means.

* *Topography of Rome*, 1834, Vol. II, p. 306.

Digitized by Google

that there was urgent need for a review of the whole subject. It was important that no time should be lost in effecting this, while it might yet be possible to do so. I therefore determined to undertake a new and thorough investigation, by making a laborious structural examination of every part of the remains likely to yield any useful results; and by collecting all available living testimony, especially such as bore upon modern interferences with the ancient work. Mr. Atkins' plan having proved defective in accuracy, and lacking in detail, a fresh survey was made with tape and compass in 1880, and a new plan prepared, on which every superficial incident is clearly marked. The whole work, extending over about five months, was completed in the summer of 1881.

27. During this investigation, every critical point was laid bare; and it may be said, almost with literal truth, that "no stone has been left unturned" in the endeavour to get at every important fact. All the entrances, and the principal wall-faces, (so far as any light was likely to be thrown upon the subject), were exposed, measured and re-covered. To have exhaustively continued the process along every yard of the ruined walls, would have involved many more weeks of unprofitable labour,—out of all proportion to the very small results that would have been obtained. The ditches (which had never been seen since the camp was destroyed:—indeed, there is reason for thinking that their very existence was generally unknown) were cleared out, and sections taken, in many places; the *talus* was trenched through and through; every other noteworthy object was examined; and more than fifty pits and hollows, which invited inspection, were emptied or probed, but without result, except to show that the earlier explorers had not left their work incomplete.

28. No pains have been spared in making this an accurate and trustworthy record of all the ascertainable facts of the subject. The author by no means professes to be able to clear up all its difficulties; and several problems still remain unsolved. The reader will find the conditions of these freely stated and discussed; and may be glad to be thus furnished with data which may profitably be used for comparison with those of analogous works, when these shall have received their due of careful examination. While shunning those fascinating, but often baseless hypotheses, which, at the same time, are so cheap and so worthless, the author has tried not to exceed his warrant in theorizing;—as far as possible limiting himself to the simple conclusions which seem to flow naturally from observing the existing state of the remains, and the character of the objects found within their precincts. It is only after this fashion that such a subject can be treated in a rational way; and a solid contribution be made to our knowledge of ancient castrametation.

29. But, while thus dealing with the affirmative side of the theme,—in which it is believed, everything of value has been included,—allegiance to scientific truth has not unfrequently imposed upon the author the duty of traversing the statements and theories of earlier workers in the field. These criticisms, however, are applied only to the principal points—those that seemed worthy to challenge controversy. Had they extended to every small mistake, the reader would have been wearied with a profitless series of comments.

Digitized by Google

30. The analogues described in the appendix to chapter II, for the most part, have been selected from those regions the dwellers in which, at some time or other, may possibly have had some near or remote connexion with the fortunes of the district now known as North Somerset; or may have been kindred to such as have sojourned there. Only those examples of pits have been adduced in illustration, which, out of diverse varieties, attributable to almost as many motives, and devoted to as many uses, seem to present a true analogy, in form and purpose, with the pits of Worlebury.

31. When this work was first projected, it was intended that it should comprise not only the archæology of the camp, but also that of the whole hill and its fringes. Materials were gathered for this purpose; but they proved to be so fragmentary, so scanty, so unmarked by accurate observation, and so incapable, at present, of mutual adjustment, that it was decided to limit the scope of these pages to the camp itself;—giving only a slight account of the indications of its ancient surroundings, and of the finding of local relics.

32. Materials for a complete Bibliography of Worlebury were also collected: but, as a large number of the references were either to passing notices, or second-hand statements, it was deemed not worth publishing as a whole. The following list comprises all the more important entries. Some of the earlier ones have very little intrinsic value; but they are included, because they were published while the camp was yet scarcely known.

SELECT BIBLIOGRAPHY OF WORLEBURY.

1791. *History of Somerset*, by the Rev. John Collinson, F.A.S. Vol. I, p. xii: The sea formerly flowed up to Banwell, Churchill, &c. Vol. III, p. 610: A very short and inaccurate account of the camp, which is referred to as "*Worle-Berry*, a vast Roman encampment of a circular form * * * fortified in some parts with one and in others with two and three ditches, and a rampire of heaped stones in many places twenty feet in height." "This was the last fortification the Romans had in this district westward;" and "was probably one of their *Castra æstiva*."

1806. Camden's *Britannia*, Gough's edition. Vol. I, p. 106: A few words taken from Collinson:—"*Worteberry*, with two or three ditches, a rampart of stones twenty feet high."

1821. *Memoirs Historical and Topographical of Bristol and its Neighbourhood*, by the Rev. Samuel Seyer. Vol. I, pp. 83, 84: Describes the hill. Gives length, breadth, and area of the camp. Notices the seven ditches at the eastern end. Describes the ramparts. Notices the oblong chamber. Thinks some chieftain of the Hædui built the place; and that it was sometime occupied by the Danes. Vol. I, p. 86: Adduces Barrett's authority (*The History and Antiquities of the City of Bristol*, 1789, p. 10) for the statement "that Roman coins have been dug up at Worle Hill" by Mr. Swymmer. Vol. I, p. 238: Quotes from the same work a reference to *Langtoft's Chronicle*, *in re* a defeat of the Danes by Alfred, and their flight to Worle-hill; but discredits the writer's authority.

1829. *Delineations of the North Western Division of the County of Somerset*, by John Rutter. P. xxi: A short general notice of Worlebury and its position. P. 50: Alleged origin of the name

Digitized by Google

Knightstone. Pp. 52-56: Quotes Seyer's description of the camp nearly word for word. Notices "several curious circles within the area of this camp;" and "a subterranean passage from the top, through the rock to the lower part of the hill." Thinks the oblong chamber was a water-reservoir; and that the camp "was calculated to contain from 40,000 to 50,000 men." Quotes from Seyer the story about the defeat of the Danes; but without his qualifying comments. Erroneously cites the *Saxon Chronicle, anno* 998, for an account of a local event, not recorded in that work. Notices the "natural barrier of perpendicular rocks, from 30 to 40 feet deep." Describes outworks (now nearly all destroyed) on the western declivity of the hill, and a *tumulus*, which no longer exists. P. 63: Thinks Worlebury was one in "a series of Roman guard stations." P. 271: Supports Seyer's opinion that the British "first began to fortify their camps soon after the Roman invasion;" and regards "British Camps" as "fortified towns, or hill forts where the chief, with his immediate attendants, and their families, resided; and into which the inhabitants of the neighbourhood retreated," when necessary. P. 53: A very small and rude wood-cut plan of "*Worlebury Camp*" and its surroundings.

1836. *History of Somersetshire*, by the Rev. W. Phelps, F.S.A. Book III, Ancient History, pp. 110, 111: Worlebury, a "Belgic-British camp." "A singularly-formed fort, and of great antiquity, * * * connected no doubt with the commercial intercourse of the Phœnician and subsequent navigators." Describes the *valla;* and correctly gives the area as "about ten acres." Adopts Seyer's description of the "square excavation." Regards the circles as "the site of tents." Notices a "circle of stones, surrounded by a shallow trench," which "seems to have been the foundation of a beacon." Mentions Picwinnard carn, "under which, perhaps, the body of some British chieftain is deposited." Refers to "various traces of earthworks," on "the hill towards the east." *Ibid.* p. 109: a small, incomplete, and inaccurate lithographed plan of Worlebury, from a survey by P. Crocker.

1845. *The Archæological Journal*, Vol. I, pp. 308-310: In a Paper "*On ancient mixed Masonry of Brick and Stone*," Mr. M. H. Bloxam mentions the British masonry on Worle-hill; notices pit-like cavities in the inclosure; refers to *Munimenta Antiqua* for description of ancient British dwellings like those on Worle-hill; and of British masonry like that of Worlebury.

1846. *The Principles of Gothic Ecclesiastical Architecture*, by Matthew Holbeche Bloxam. 8th edition, p. 34: A short notice of "primitive dry stone masonry in the circumvallations of the ancient British fastness on Worle Hill." Illustrated by a plate showing a portion of the walling in elevation and section.

1851. *The Weston-super-Mare Gazette*, September 23rd: In an account of the Annual Meeting of the Som. Arch. Soc., held at Weston-super-mare, a report is given of Mr. Warre's Paper "On the British Camp on Worle Hill;" with a few remarks on Saint Kew's Steps. Followed by a very brief notice of the Society's visit to the camp, &c. November 10th: A report on "Archæological Research in Worlebury Camp."

1851. *The Somersetshire Archæological and Natural History Society: Proceedings at the Annual Meeting held at Weston super-Mare*, on Tuesday and Wednesday, September 16th and 17th. Reprinted, in pamphlet-form, from the *Weston-super-Mare Gazette* of September 23rd, with an Appendix reprinted from the same journal of November 10th.

1851. *Proceedings of the Somersetshire Archæological and Natural History Society*, Vol. II, published in 1852. Part i, p. 16: The Society visit Worlebury. Part ii, pp. 64-85: A Paper on "Worle

Digitized by Google

Camp," by the Rev. Francis Warre, in which he regards it as one of the most remarkable and mysterious camps he had ever seen, and probably more than 2000 years old; "evidently intended for the permanent occupation of a large force:" if of Saxon date, it would probably have been mentioned in the Chronicles of the time. Worlebury not mentioned by any old author. Probably to be attributed to the Belgæ or the Hædui. Refers to the Welsh Triads, *in re* Celtic tribal settlements. Worlebury probably coëval with the "druidical monuments." The Mendip mines worked in pre-Roman times. Perhaps Worlebury was a town connected with this early trade; and more than a military station. Quotes the greater part of Rutter's (and Seyer's) account. The ramparts were once dry walls. "No appearance of walls" at the trenches to the east of the camp. The "keep" strongly defended. Position of main entrance, "defended by a strong flanking outwork—whether a tower or no I will not venture to guess." Positions of the other two entrances. Remains of smaller walls "along the south side of the hill:" [evidently unaware that these *débris* mark filled-up ditches]. The outer inclosure and its entrance. Subdivision of the fortress into four compartments. Notices the "curious circles of from twenty-eight to thirty feet in diameter," the foundations of ancient huts, which he describes. Quotes Catlin's account of the huts of the Mandans. Thinks "the fortified area would accommodate a closely packed population of from fifteen to twenty thousand persons; * * * but it is not likely that the whole population constantly resided" in the camp. Traces of earthworks and circles seen much to the eastward. A village probably extended to Saint Kew's Steps. Notices of these and of Kewstoke. Describes his exploratory work in the pits. Thinks the relics are of two dates "separated from each other by an interval of several hundred years." Concludes "that the place was deserted from the time that Ostorius Scapula took military possession of the country from the Avon to the Parret, * * * that the British inhabitants reduced to slavery by their conquerors, and having learned to construct better habitations than subterranean huts had left Worle Hill for Axium; and that their original habitations, having fallen into decay, soon became open holes, the wattle or brushwood roofs of which, having fallen in, afforded the material of the layer of dark mould mixed with pieces of stick," which was "almost invariably found." Thinks that Ceawlin subsequently overran this part, and again took the camp. Notices indications pointing to a state of slavery. Detects "an evident appearance of a breach in the south rampart."

Ibid., pp. 125, 126: In a letter to Mr. Warre, dated April 14th, 1852, and accompanying his plan of the camp, Mr. Martin Atkins speculates cautiously on the use of "the clusters of detached triangular platforms." Notices "the serrated *upper* edge of the rampart [really a filled-up ditch] detached from the main rampart on the south of the camp;" and "the scolloped line" fringing "the *under* side of the main south rampart" [really the accidentally ragged edge of the foot of the *débris* of the walls] which "is meant to represent * * * the remains of places of shelter for the sentries, formed in the facing of the wall." [He evidently was unaware of the fact that this irregular line is from 20 to 30 feet below the outermost face of the ancient wall; and, hence, could not mark any feature of that work]. Incidentally, he also refers to "the mysterious small circular sinkings on the main walls." Thinks the path from the lime-kiln to the outer inclosure is ancient.

Ibid., p. 64: A lithographed plan of the camp, in outline, dated 1852, (but made before the work of that year was begun), from a survey by Mr. Atkins, defective in accuracy and detail,

Digitized by Google

accompanies Mr. Warre's Paper, which is also illustrated by three lithographed plates,—views of the upper part of the way to the spring, of the steened pit, and of Saint Kew's Steps.

1851. *The Archæological Journal*, Vol. VIII, pp. 415-418: A Report by Mr. Warre on the results of his work at Worlebury from Thursday, October 17th, to Saturday, November 1st, 1851.

1852. *The Weston-super-Mare Gazette*, May 29th: A Report of discoveries recently made at Worlebury. *Ibid.*, June 12th. A continued Report of the same work.

1852. *Proceedings of the Somersetshire Archæological and Natural History Society*, Vol. III, published in 1853. Part i, pp. 9, 10: Mr. Warre reports that "during the last spring" [1852] he had "opened several hut circles with great success;" and describes the results. Roman relics also found on the surface. Thinks "the huts now opened were neither granaries, nor tombs, nor permanent residences, but simply places of shelter in time of danger; that the roofs had been destroyed by fire; that the place was not occupied after the Roman invasion;" and that the skeletons were deposited long after the roofs were destroyed.

Ibid., pp. 12, 13: Two wood-cut plates of pottery, weapons, and other objects found.

1852. *The Archæological Journal*, Vol. IX, pp. 96, 97: Mr. Warre exhibits at a Meeting of the Institute "several specimens of the pottery found on Worle Hill," which "presented no resemblance to that of British or Roman manufacture."

1853. *Proceedings of the Somersetshire Archæological and Natural History Society*, Vol. IV, published in 1854. Part ii, pp. 124-127: "Appendix to Paper on Worle Camp," which was read in 1851. Mr. Warre repeats his assertion as to the two sieges; reports on his continued exploration in May and the autumn of 1852; mentions the finding, near the surface, of a quantity of Roman pottery, coins, beads, and bronze ornaments; accepts Mr. Atkins' views as to "slingers' platforms;" and announces discovery of the composite structure of the walls.

1853. *The Archæological Journal*, Vol. X, p. 60: Mr. Warre briefly reports on the continuation of his work at Worlebury which he says he has nearly completed (3rd December, 1852).

——. *Whereat's New Handbook to Weston-super-Mare and its neighbourhood*, N.D. Contains, pp. 12-20, a chapter on the "Early History of Weston-super-Mare," giving a short account of Worlebury and its environs, with quotations from Revs. W. Phelps and F. Warre.

1860. *Weston as it was 2000 years ago:* A Lecture delivered at Weston-super-mare by the Rev. William Jackson, M.A., on the 5th October. Reported in the *Weston-super-Mare Gazette* of the 13th of the same month; and reprinted therefrom in pamphlet-form.

1861. *The Journal of the British Archæological Association*, Vol. XVII, pp. 1-8: A Paper on "Ancient British Walls," by Sir J. Gardner Wilkinson, contains references to the construction of "the walls of the large town on Worle hill," the curved form of its entrance, &c., &c., illustrated by Figs. 2 and 3, Plate I, giving two sketches of portions of the stone-facing.

——. *Robbins's Sixpenny Guide to Weston-super-Mare and the Neighbourhood*, N.D. A chapter on "Ancient Weston," pp. 13-16; and a "Walk to Worle Hill and the Encampment," pp. 78-84; with short quotations from Rutter, Phelps, and Warre.

1871. *Prehistoric Weston: or Weston more than 2000 years ago:* A Lecture delivered at Weston-super-mare by the Rev. W. Jackson, M.A., F.S.A., on the 28th September. Reported in the *Weston Mercury and Somersetshire Herald* of the 7th and 14th of the following month.

1872. An improved copy of Mr. E. M. Atkins' plan of Worlebury prepared by C. W. Dymond, C.E.

1875. *The Journal of the British Archæological Association*, Vol. XXXI, pp. 266-275: A Paper on

Digitized by Google

"Worlebury," by the Rev. H. M. Scarth, M.A., giving a brief description of the camp, a summary of the contents of the pits, and quotations from Revs. F. Warre and W. Jackson.

Ibid., p. 267: Mr. Dymond's edition, 1872, of Mr. Atkins' plan, photo-lithographed to a reduced scale.

Ibid., pp. 461-464: Visit of the Association to Worlebury.

——. *Pleasant Trips out of Bristol*, N.D., by J. F. Nicholls, F.S.A. Contains, pp. 41-48, a popular, but by no means accurate description of Worlebury.

1876. *Proceedings of the Bath Natural History and Antiquarian Field Club*, Vol. III, No. 4, pp. 379-397: A Lecture on "The Ancient Stronghold of Worlebury," delivered at Bath by the Rev. H. G. Tomkins, on the 10th February; giving a compendious description of the camp, and of the objects found in the pits; and touching on the archæology of the hill outside the works. Illustrated by Mr. Dymond's plan of 1872, and three plates,—sketches of pottery, ornaments and weapons, a view of the steened pit, diagrams and sketch of the wall-structure.

1877. *Visitors' Handbook to Weston-super-Mare and its Vicinity.* The archæology by Rev. W. Jackson. P. 49: Former hydrography of the site of Weston. Pp. 57, 63, and Appendix, pp. vii, xxviii: Sundry notes referring to the precincts of the camp and Saint Kew's Steps. Pp. 75-106: "A Brief Account of Worlebury,"—too long to be abstracted here.

Ibid., Frontispiece: a "Section of British Hut restored," representing pit in the middle, with a fire burning at the bottom of it; covered with a tent-like roof of young trees leaning on a rough dwarf wall, with a ditch outside. P. 106: A view of huts at Castiglione.

1880. A new Survey of Worlebury made by Mr. C. W. Dymond.

1880. *Worlebury Camp:* A Lecture delivered at Weston-super-mare, by the Rev. H. G. Tomkins, on the 9th November. Reported in the *Weston-super-Mare Gazette*, and in the *Weston Mercury* of the 13th of the same month.

1881. The Camp explored by Mr. Dymond.

1881. *Bristol Past and Present*, in 3 vols., by J. F. Nicholls, F.S.A., and John Taylor. Vol. I, pp. 9-11: A short account of Worlebury, most of the particulars of which are taken from Mr. Nicholls' *Pleasant Trips out of Bristol*, repeating the exaggerations of that work,—as, *e.g.*, the "mighty wall more than a mile in circumference;" "innumerable platforms for slingers built up like brackets upon the steep acclivity" of the hill; and "in the larger area there are literally hundreds of the pit-dwellings." Mr. Warre's account of the pits is abstracted; and the conclusion reached that the skeletons discovered were those of "men of a third race who probably fell before the Roman or, it may be, Saxon prowess;" and that "the inference is clear" that "here are the marks of at least three distinct epochs in the history of the spot, epochs divided by long periods."

1885. *The Brighton of the West; or Weston-super-Mare and what it has grown from:* A descriptive and historical sketch, by Mr. E. Y. Poole. Published in the *Weston-super-Mare Gazette* of October 3rd and 10th. The first article enumerates the discoveries of ancient relics on and around the site of Weston; touches on those found in the camp; describes the habits of the early inhabitants of the country, and quotes accounts of two local incursions of the Danes.

1886. *Worlebury: an Ancient Stronghold in the County of Somerset.* By C. W. Dymond, F.S.A., M.Inst.C.E. and the Rev. H. G. Tomkins. Printed for the Authors, and issued to Subscribers.

Digitized by Google

CHAPTER II.

ENVIRONMENT—APPROACHES—SITE—CONSTRUCTIVE FEATURES—PITS—WATER-SUPPLY.

ENVIRONMENT.

1. FROM its physical conformation, as well as from its geographical position, the greater part of that district which now forms the county of Somerset, during the earliest times of which any record has come down to us,—and, doubtless, for generations anterior to the first chapter of our island-story,—was a great battle-ground of contending tribes. It was the "border" of southern Britain, nearly spanning the narrow space, flanked by two seas, which intervened between the highlands of the west and the softer regions of the interior; and, from these accidents of position, it could not fail to become a theatre of great events, through the long ages preceding the final settlement of the country. It lay directly in the path of that westward tide of migration which, overflowing continental limits, threw upon our southern shores wave after wave of invasion and conquest, checked only when nature combined with man in successful resistance to the onward movement. The fertile soil, genial climate, and commercial advantages of this part of Britain were such as to attract some of the strongest swarms thrown off by the European hive, and to stimulate the resolution to retain them when acquired. Hence, every defensible point was seized and fortified; and so numerous were these, that the remains of more than fifty works of this nature may be found in Somerset alone; including several specimens of ancient castrametation which rank among the finest in the kingdom. And well they may: for the tenants of this region, when hard pressed from without, and unwilling to submit, had sometimes no alternative but to be driven into the sea, or to take refuge with other, and, perhaps, alien tribes in the Dumnonian fastnesses, or among the mountains of the Silures. A resolute people were here happily furnished with many resources for withstanding attempts at forcible dispossession. While their eastward borders were strong by nature, and strengthened by art,—in

Digitized by Google

the rear, sometimes safeguarded by morasses, and by wet alluvial levels, rose several detached heights, bold in elevation, and not without their "munitions of rocks", bidding defiance to assault. Of these, the most noteworthy are Brent-knoll, Brean-down and Worle-hill. The two latter, which are of nearly equal elevation, jut into the Bristol-channel;—Brean-down being a mile-and-a-half in length, almost insulated, and entirely precipitous on its southern side; while Worle-hill, extending to the length of three miles, is wave-washed along little more than one third of its circuit.[1] Between these headlands, as well as behind and beyond them, stretch those levels which, even so late as the present century, were difficult to traverse, save by the regular roads; and they must have been still less practicable in ancient times. Both heights have been fortified: but of the works on Brean-down,—though, naturally, by much the stronger position,—the slight remains show that it never could have been regarded as an important post. Worle-hill, on the contrary, is crowned by the ruins of a fortress complicated in construction by the adoption of every defensive expedient which, with the materials at hand, the military science of an early age could devise. Why this rejection of the more defensible position, in favour of the one placed second by nature? The reason, doubtless, was this, that, whereas on the wild steeps of Brean-down there was an almost total lack of habitable ground, the succession of gentle, sunny slopes, extending over a square mile, along the southern side of its rival, (to say nothing of the pastures on its northern flank), were well adapted to be the location of a populous settlement which found security in comparative isolation, and rejoiced in the protection of an almost impregnable stronghold.[2] It must not be supposed that the physical resources of this location were confined to the hill and its grazing-grounds. Notwithstanding the backward state of drainage, which then, as in recent times, must have prevented the plain from yielding its full tribute of sustenance to the people who lived on its borders, no doubt it furnished ample facilities for fowling; and it is likely that some portions of it afforded coarse pasturage. On the other hand, there were the ever-available treasures of the sea, of which the early dwellers on its shores (if capable of making nets) may have availed themselves, even if Dion Cassius was correct in noting the abstinence of the

---

[1] There are evidences (see par. 3,) which make it clear that, in ancient times, the shore-lines of the flanking bays were much farther inland than they are at present; but there are no data for fixing their limits in early Worlebury days. It would take but little retirement of the shore-line to insulate Brean-down, which, in that condition, would scarcely need fortification. It is, however, intrenched against approach from the landward side; which seems to suggest the idea that, at the time when its earthworks were thrown up, there was a direct connexion, as there is now, with the mainland.

[2] The distances, measured in a straight line, between Worlebury and the nearest anciently fortified positions, are as follow:—To St. Thomas' Head, or Sand-point, N. by E., 2½ miles; to Cadbury, near Yatton, E.N.E., 8 miles; to Dolbury, E. by S., 9 miles; to Banwell-camp, E.S.E., 6½ miles; and to Brean-down, S.S.W., 2½ miles. (See inset-map on Plate I.) The suggestion which concludes this part of paragraph 1, is supported by the case of St. Thomas' Head, a low isolated ridge, two miles in length, which has been extensively fortified: for here also, though not naturally a strong position, there is an ample breadth of good pastures, and pleasant dwelling-spaces.

Digitized by Google

northern natives from this kind of food. At all events, they resorted to the rocks for shell-fish.

THE APPROACHES.

2. *(a) Landward.* A station of such importance as Worlebury must have been made directly accessible from the interior by at least one road over some part of the intervening levels. With neither records nor ancient traces to indicate the adopted line, or lines, it is impossible to do more than speculate upon probabilities. The nearest point at which any ground elevated above the "marsh" approaches Worle-hill is Locking-head, an outlying toe of the uplands, distant one mile, S.E.; and this interval is still crossed by the shortest connecting road. All other transits over the level would be much longer. Another way probably ran southward, along the top of the low ridge which, then as now, must have been thrown up by tidal action along the sea-coast. This would lead, in two miles, to high ground at Uphill, near the point at which Sir R. C. Hoare fixed his settlement *Ad Axium.* Possibly, there was a third, and similar way, northward, by the margin of the opposite bay, to St. Thomas' Head, which, however, must have been even more difficult of access from the interior than was Worle-hill, unless, as there is some reason for thinking, the tidal channels, in pre-Roman times, were confined by embankments, which would afford a means of communication, along the estuary of the Yeo, between this outlying ridge and the rising ground at Congresbury.*

3. *(b) Seaward.* Anciently, there must have been the same facilities for communication with Worle-hill by water as there are at present. Boats could easily use the many creeks among the rocks fringing the promontory; and sufficient harbourage, with a soft bottom, would tempt larger craft to frequent the recess of the bay under the hill in the rear of the rock now known as Knightstone. That at one time this bay ran farther inland, is evident from the discovery, at the foot of the hill, some thirty-eight years ago, of remains that were thought to be those of an ancient galley, at a point a quarter of a mile eastward from the present beach. At about twice that distance, water-worn pebbles, flints, and pieces of fossilized bone, were found, in the year 1885, in a well at the depth of 12 feet from the surface. At Wilcocks' pottery, yet another quarter of a mile inland, a cutting exposed strong yellow clay, changing to blue clay, with a few pebbles, 7 feet. Then, 2 feet of peat, with wreck of timber, thorns and a few shells; below which was blue clay. No sand was seen. At Matthews' pottery, close by, a curved row of stakes, like those now put up in the fishing grounds, were found in connexion with an old beach. On the other side of the hill, if the eye may be trusted to judge, there was, at one time, a creek, or "pill", which ran up

* *Proceedings of the Somersetshire Archæological and Natural History Society*, 1880, Vol. XXVI, (Art. on The Abbot's Way, by C. W. Dymond, F.S.A.)

Digitized by Google

close under the shelter of the high land, to Kewstoke: and the supposition seems to be a very reasonable one, that St. Kew's Steps were laid to facilitate communication between this little port, with, perhaps, its early church, and the larger settlement over the ridge.

THE SITE AND DISPOSITION OF THE WORKS.

4. On reference to the map of the site of this ancient settlement and its immediate environs,* it will be seen that the remains of the camp, known by the name of *Worlebury*,[3] occupy the crest and portions of the steep flanks of the western or sea-ward extremity of Worle-hill.[4] The greater part of the northern side of the fortified inclosure is formed by a range of cliffs, of no great height, yet, except at a few points, very difficult to scale. From its eastern termination, the defences were continued by a massive wall of dry masonry, at first running nearly in a line with the cliffs, to the north-eastern entrance; then, bending almost at a right-angle toward the south, and crossing the top of the flat ridge, until, with another change of direction, it trended westward, to a bold re-entrant angle, in which was another, the principal or southern entrance. At a point a few yards eastward from this, a deep notch in the wall marks the southern extremity of a fosse, part artificial and part natural, extending N.N.W. across the camp to the line of cliffs,—thus partially isolating a nearly square inclosure which, for convenience of description, may be called the "keep" of the citadel. This is the highest part of the *enceinte;* and, from its eastern side, the surface declines, evenly and gently, one in twenty-six, along the axis of the ridge, to the brow of the western steeps. From the principal entrance, the great wall continued, at first south-westward; then made a wide sweep, to suit the contours of the ground, with a direction generally westward; and thus gradually closed up toward a rocky escarpment, where was a third, the western entrance. From thence, for some undefined distance eastward, along the brow of the steep slope above the cliffs, there are very slight traces of a former embankment. These, which were not intrenched, (except around a portion of the "keep"), were the inner and principal defences of the place, inclosing an area of 10¼ acres,[5] about a third of which

---

3 In Gough's edition of Camden's *Britannia*, (Vol. I. p. 106), the name of the camp is spelled *Wortleberry*,—the *t* being probably a misprint for *l*. The form of the latter part of the word frequently occurs in the older topographical books.

4 The highest part of the hill, which is a mile from the nose of the promontory, is about 310 feet above the present level of the plain, which is about 10 feet above high-water. The eastern end of the camp is about 40 feet lower; and there is a farther fall of about 60 feet to its western end, which is thus about 210 feet above the same *datum*. The whole of the hill is of the carboniferous, or mountain-limestone formation, with a southerly dip, and a steep northerly escarpment. The outcrop of the rock on that side forms a line of cliffs toward the west, varying in perpendicular height from 55 to 10 feet; and a series of rocky bluffs farther toward the east. The dip of the strata varies from about 30° at the camp to 45° at St. Kew's Steps; but it is considerably more at some faults farther eastward.

5 This is the area bounded by the inner face of the original walls, as nearly as can now be ascertained. A former rather smaller estimate, previously published on the authority of the writer, was based upon measurements to the inner edge of the ruined *agger*, taken from Mr. Martin Atkins' plan.

* Plate I.

Digitized by Google

is occupied by the groups of pits which are a striking feature of the camp. On the steep northerly declivity of the hill, below the cliffs, rests a *talus* of loose stones. From the point where these and the cliffs terminate, toward the east, the line was continued by a ditch,[6] succeeded, at the north-eastern entrance, by a second massive stone-wall, similar to the inner one, parallel with it, crossing the ridge, and sweeping around to a point below the grand entrance, where it ended. This wall was intrenched; and, after an interval left for the entrance-road, the ditch was continued, in a line nearly parallel with the great southern wall, and at a distance therefrom averaging about 50 feet, to the rocks at the western end;—thus completing the second circuit. Along the whole of its length, in common with all the other external ditches, it appears to have been furnished with a species of breast-work. Between the two great walls, from 50 to 80 feet apart, defending the eastern and southern sides of the "keep", a ditch was cut, deeply at the two extremities, but shallowing toward the crest of the ridge where, for about 50 feet, it disappears. But, outside all these, there were yet other works, of which only a very general description need here be given. They consisted chiefly of a series of outer ditches, sometimes cut in the rock, here and there interrupted, but otherwise continuous for considerable distances. Two of these, (making, with the one already mentioned, three in all), curtailed at their western extremities by abrupt steeps, defended the northern side of the "keep": four, at narrow intervals, fenced it concentrically on the eastern side; and one was continued along the southern flank, bending around to, and terminating in, the ditch of the outer main wall. The southern side, and the western end of the camp were, in like manner, farther protected by an extensive series of outermost works, shown by dotted outlines in the plan, consisting partly of ditches, and partly of groups of detached stony patches, of triangular shape, and of uncertain use. From Rutter's statement, we may gather that there were other ancient works beyond and below the outermost of those planned by Mr. Atkins. He says*:—"the ground to the west, at the brow of the hill, above Devonshire cottage, [now Cairo-lodge], is covered with evident vestiges of extensive earth-works, one of which is a somewhat irregular figure, approaching to the form of a parallelogram, from which there was a broad and gradual descent to the beach. Another embanked enclosure, though small, is in the form of an amphitheatre, and at the western extremity, beyond Claremont, is a tumulus, surrounded by a low ditch, curiously excavated from the sides of the shallow channel in which it is situated." These outworks have almost entirely disappeared; having, unfortunately, occupied ground most of which has been utilized for suburban villas and gardens.

5. Thus much for a general glance at the works properly appertaining to the camp itself. A little to the eastward,—yet in close connexion with them,—were two *valla* com-

---

6 This word is used in accordance with military nomenclature; but these ditches were not made to hold water.

* *Delineations of the North Western Division of the County of Somerset*, 1829, by John Rutter, p. 56.

Digitized by Google

mencing at the rocks of the northern shore, carried in nearly parallel lines up the steep acclivity, crossing the ridge, and continued, with some divergence, for a little distance down the southern slope, on which they were united by a slighter *vallum* ranging nearly east and west. The included space has generally been regarded as intended to fold the cattle belonging to the tribe during a siege. This may have been one of the purposes for which these outermost intrenchments were thrown up: but it should be noted that the most available part of the grazing-ground, (that on the hill-top, between the two long *valla*), being in the fore-front of the position, would be singularly exposed to attack from the quarter whence it was most likely to come. It seems probable, then, that these *valla* were intended to check the first assaults in a siege, as much as to secure the live-stock of the garrison from capture. Common sense dictates that, when practicable, such folds should be placed in the rear. Here, however, there was no room for choice: and this fact allows some weight to the ordinary theory, as a partial explanation of the use of these outworks.

6. I now proceed, *seriatim*, to a detailed account of the several features of the fortress. Particulars which could not be introduced into this chapter without disconnecting and confusing the general treatment of the subject, are recorded in the *Descriptive Index to the Plates*, to the pertinent parts of which the reader is recommended in every case to refer, in connexion with the corresponding portions of the following descriptions.

THE RAMPARTS.

7. The *aggeres*—which now appear to the eye of the hurried visitor nothing but confused heaps of quarry-stone—are really *rudera* of walls erected with considerable care, but without mortar, after the manner of the most primitive masonry, though with comparatively small materials. At intervals, over their whole extent, remains of the ancient face-work may yet be seen.

8. These ramparts[7] were thus constructed. First, a massive wall was raised to the required height. It was hearted with loose stones, and faced on both sides with dry masonry, carried up from the ground with a varying batter.[8] The thickness of this internal

---

7 The word *rampart* has two meanings—a general and a special one. The former embraces the entire wall or bank raised around a fortified place: the latter applies particularly to the platform, or *chemin de ronde*, behind a parapet or battlement. The former is the sense in which the word is here used.

8 This was found to be the case, wherever the facing was followed down through the rubbish, except in a very few special, and evidently subordinate instances. Mr. Jackson makes a curious assertion in his lecture of 1860, which is entirely unsupported by facts. It is that "at the bottom of Worlebury walls they laid a material of pounded limestone,—a concrete without cement. Dolbury camp was different, being built upon dry masses of masonry." Now the explorers in 1851-2—the only real early ones, paid very little attention to the structure of the walls; and it is only by undermining and destroying them that their foundations can be laid bare. In the rare cases in which, in the recent investigation, the line of the face-work was accidentally broken through, no such bed of small stones was observed: and as to Dolbury, the simple fact is, that the base of the wall has nowhere been exposed by any explorer. But, apart from actual proof, such a prepared foundation would be utterly useless, and, hence, in the highest degree, improbable.

Digitized by Google

wall, or core, as also that of many other parts of the work, varied much; but, measured across its top, it appears to have been seldom less than 6 feet. It was evidently crowned by a parapet; but whether this was of the same thickness as the wall on which it stood, or whether it was thinner, leaving room for a walk behind it on the same part of the wall, there is not sufficient evidence to determine; for the whole of the parapets, even to the last stone, appear to have been overthrown.[9] The crest of the parapet, at various points, probably stood from 5 to 15 feet above the ground at its rear;—the difference being due partly to the relative slopes of the hill, and partly to the strength of various portions of the rampart being adjusted to the apprehended exigencies of their positions.

9. But a wall built, as this was, without mortar, would fall an easy prey to the assaults of an enemy, who would only have to prise a few stones out of the footings, to bring the facing down with a run.[10] Hence, it was thought needful to protect it against the possibility of rapid demolition; and the end was thus accomplished. The whole of the outer face of the wall, up to a height about 4 or 5 feet below its crest, (or below that of the parapet), was supported by a continuous buttress of loose stones, from 4 to 8 feet in thickness, also protected by an uncemented battering face. Usually, the top appears to have been left nearly flat, forming a *berme* or terrace, on which some of the garrison might, for a while, make a stand,—the more easily to repel close attacks on the wall itself. In some parts,—as at the eastern side of the "keep",—this single re-inforcement formed the only addition to the internal wall on its outer side; but, where the ground fell steeply away, a second buttress was added, and, in one part, even a third; each about 4 feet lower than the one within it, and with similar variations in thickness.[11] The outer elevation of this compound wall, then, presented the appearance of a succession of terraces, conformed longitudinally to the

---

9 Plate V, fig. 2, seems to show an exception: but in this case the apparent parapet is formed only by the dip of the ramp behind it; the only one (if, indeed, it was intended to be such) which can now be seen. The inner face of the central wall is indicated, for considerable distances, by a spine of stones forming its present top, from which the *débris* slopes away on either side.

10 Mr. Jackson strangely seems to regard this as one of the merits of such walling; for he says that "the fighting men, when driven off the wavy terraces running along the external face [of the ramparts], would naturally retreat backwards, and might very possibly push down their own foot-holds." (*Handb. W.S.M.*, p. 88). And, in another place, (*Lecture*, 1860), he expressed the opinion that the builders of Worlebury purposely made their walls so that they might come down on the assailants, if they removed one stone! This view seems quite to contradict that which is quoted a little farther on, from the same author, respecting the stability of the Worlebury walling. *Infra*, 22.

11 In his Lecture, 1871, Mr. Jackson erroneously speaks of the rampart "on the west side of the great gate" being formed with "horizontal benchings-in, rising over each other in six several series of imperfectly tower-like elevations." It has also been recorded in more than one other published account that, at one place, as many as five stages were found: but this is an error which has been traced to the misunderstanding of a diagram made by Mr. H. G. Tomkins during the time of Mr. Warre's exploration of the pits, when he measured a section of the wall, as it then stood. This diagram, which, Mr. Tomkins thought, must have been taken a few yards to the north of the newly-measured section, (Plate V, fig. 2), shows four stages, (fig. 6). Three only can now be found; and it is not apparent where the fourth was interposed. Another section, a few yards to the south, and, probably, on or close to the line of fig. 2, was, at the same time, taken by Mr. W. S. Tomkins. It also gives only three stages, (fig. 6). Both sections in this figure must, however, be regarded as nothing more than conventional sketches, indicating the order of occurrence of certain rude dimensions.

Digitized by Google

inclination of the ground. Here and there are slight indications that some of these external stages may have been connected by ramps; but too little evidence exists to establish the fact.

10. The hinder part of the rampart, in some places, was raised, by similar degrees, to a considerable height; access to it, no doubt, being gained either by ramps or by steps. In one part of the eastern wall, these inner platforms, or stages, were found to be more numerous than the outer ones. The principal reason for this would seem to be, that they might the more easily be mounted. But, along the greater part of the length of the southern wall, from its western extremity to within 200 feet of the grand entrance, it is probable that the parapet rose almost immediately from the level of the inclosure;—as the ruins there are exceedingly low; and only one inner face (presumably that of the parapet) has been found. There is some reason for thinking that the inner platforms, or benches, were macadamized; for strata of small stones, sometimes covered by large fallen ones, here and there occur at heights in the *agger* suggestive of this theory. It seems likely that the builders of a work like this would adopt such a means of binding together superficially the unstable angular fragments of which the bulk of the walls was composed, so that they might be traversed with facility and safety.[12]

11. On reference to the plan, it will be seen that a portion of the steep slope immediately to the north of the western gateway is covered by an oblong sheet of stones which, if it were not for the interval caused by the gateway, and its flanking rocks, would be continuous with the principal *agger*. From this circumstance, it might be supposed that it was similarly built, and that it really was a continuation of the innermost defences of the camp. To settle the point, if possible, two trenches were opened through the mass of stones. One of these* was carried directly up the slope, through the widest part of the patch, in a line parallel with its western edge, and distant about 6 feet therefrom: the other at right-angles with this, on a line running nearly east and west, or parallel with the rocks. It proved that, in the former case, we had worked along the bottom of a deep and rather wide ditch. Eastward of this ditch, the ground resumes its natural level, and is covered with stones to a depth of not more than from 12 to 18 inches. No traces of walling were anywhere to be seen; but there seems to be ground for the supposition that the ditch is filled with the ruins of a simple wall (in a line with a portion of the main wall) which stood at its eastern edge, and was destined to defend the slope at its rear against a flanking attack from the west.

12. In the preceding chapter, reference has been made to certain erroneous conclusions to which Mr. Warre was led, from a slight examination of a very short length of the walls;

---

[12] For a notice of other works exhibiting analogies with the walls of Worlebury, see Appendix to this chapter, "Ramparts".

* Plate VI, fig. 18.

Digitized by Google

and, since his account was published, there has been much misapprehension as to the system upon which these were planned. The statement in Mr. Warre's report which chiefly challenges attention is italicized in the following sentence quoted therefrom.* "I discovered a peculiarity in the construction of the rampart; instead of being a plain battering wall of dry masonry, I find that the whole face of the rampart is composed of a series of platforms, about three feet in depth [width], and about four feet above each other, *not placed regularly one over the other, but almost like scales*, the whole finishing with a parapet, which acts as a breast-work to an internal platform." It is unfortunate that Mr. Warre left no plans to illustrate his description; but it has been a tradition handed down by those who were cognizant of his work at the camp that he understood the system of walling to be very much like that represented in the diagram, Plate V, fig. 7. Mr. Jackson, using terms very similar to those adopted by other writers who have repeated the traditional account, says† :—"The ramparts themselves were built in wavy terraces running along the external face, apparently intended for rows of fighting men. Mr. Martin Atkins, who was the first to observe both platforms and wall indentations, conjectured the latter to have been shelters for sentinels; they were, however, too numerous and not lofty enough for that purpose." Mr. Jackson here confounds two diverse things. The "platforms" which Mr. Atkins was "the first to observe", were not the wall-terraces, as the context would lead a reader to suppose, but the very different detached triangular objects which he regarded as the remains of "slingers' platforms". What the "wall indentations" were, must, probably, have remained a mystery, had not Mr. Atkins fortunately been very definite in assigning to them a place in his plan. In a letter addressed to Mr. Warre, he says‡ :—"The scolloped line with which I have fringed the *under* side of the main south rampart, is meant to represent what I think can be traced perceptibly, of the remains of places of shelter for the sentries, formed in the facing of the wall." At the time when this letter was penned, the structure of the walls had not been observed. Hence the mistake. This "scolloped line" was, and remains, nothing but the accidental edging of the toe of the *débris*, having nothing whatever to do with any original feature of the work. In another published account,‖ Mr. Jackson somewhat mysteriously refers to certain "curious triangular moles and circular towers", as apparently features of the ramparts. There is no evidence that such ever existed, save in that writer's fertile imagination. To ascertain the real facts, and thus to set the question at rest, the author laid open, and made accurate plans and sections of the most remarkable and least injured portions of the *aggeres*, of which the true construction is now clearly shown.[13] A study of the plans, aided by impressions received on the spot, has sufficed to make it clear

---

13 Plate V. A section of the *agger* of Worlebury, taken about 1845, is given as one of the illustrations in Mr. M. H. Bloxam's *Principles of Gothic Ecclesiastical Architecture*. Perhaps it should not be taken to represent quite accurately any measured section.

* *Proc. Som. Arch. and Nat. Hist. Soc.* for 1853, Vol. IV, part ii, pp. 126, 7.

† *Handb. W.S.M.*, p. 88. ‡ *Proc. Som. Arch. Soc.* for 1851, Vol. II, part ii, p. 126. ‖ *Lecture*, 1860.

Digitized by Google

that the theory of Mr. Warre, as to a formal scale-like structure of the outer terraces, cannot be sustained. Except at two or three points, where the marked divergence of the lines of wall-faces from their general direction is evidently exceptional, and for a purpose which also is sometimes evident, there is nothing to show that these were laid out on a system of reversed curves, or that they had any regular or designed recurrence of flexure. The contours of the work are generally free and unconstrained,—in the main following those of the ground; and they are usually somewhat wavy, because it was impossible, without using special precautions, and unnecessary, if it were possible, to build them otherwise. Frequently, for considerable distances, they are nearly straight; and the bulges and hollows of any one face match, quite as much as they alternate with, the corresponding features of the next. It is abundantly evident that strict regularity was thought to be a matter of no importance; and, when we take into account the inequalities of the site, the rudeness of the material, and the fact that these walls were, doubtless, reared by gangs of men working side by side, without reference to line or plummet, under the direction of officers who knew that no defensive advantage would be gained by greater precision, we shall be quite prepared for such a result as we here find.

13. Referring to the sections on Plate V, they appear to exhibit such irregularity of design, that it does not seem to be possible, with any degree of assurance, to make a restored representative section of the work as it originally stood. If, however, we suppose the parapet to have been 4 feet in height, and 8 feet in thickness; and if we duly increase the height of the remains of the platforms, it will be found that sufficient material has been thrown down to raise the crest of the work at the section, fig. 4, Plate V, to the height of about 15 feet from the ground.

14. It may be well to notice here the only other piece of artificial work now visible along the whole length of the outer *agger*.* It consists of a low breastwork in front of an earthen *berme*, about 2 ft. 6 ins. in width, with an earthen ramp at the back, and closed at its eastern end by a short low traverse.

15. It has hitherto been assumed, without examination, that the sheet of stones to the north-west of the last-named object, and between it and the grand gateway, is the ruin of a strong tower, or other outwork, flanking, on its eastern side, the entrance into the camp. No traces of walling are visible here: the patch is covered with vegetation—a sure sign that the soil is very little below the surface of the stones:—and, for these reasons, strengthened by the analogies of other parts of the works, which have undergone a searching investigation, it must be concluded that these are the ruins of nothing more remarkable than a simple flanking return of the outer rampart.

16. The account of the *aggeres* would not be complete without a notice of several curious

* Plate VI, figs. 12, 13 and 14.

Digitized by Google

appendages which are attached to, or, perhaps rather, associated with the principal rampart on its inner side.* As the plan shows, at intervals along its southern sweep, are found low patches of ruin, a few inches in depth, and roughly rectangular in shape. Owing to the growth of vegetation, only three of them are sufficiently clear to be measured. These are 43 ft. 6 ins., 53 feet, and 54 feet in length respectively; and in breadth they measure from 12 feet to about 15 feet from the face of the parapet. These have been carefully examined, with but little result. Portions of two of them which, on being cleared, exhibited marked features, have been planned.† In each case there are traces of an interval, or passage, about 4 ft. 6 ins. in width, between the body of the patch and the nearest face of the rampart. Mr. Jackson erroneously gives the width as "from 20 to 30 inches."‡ It has been stated that these passages formerly existed in every instance; but now, all trace of them in the other examples has been nearly obliterated. These works seem to have been finished, along that edge which is farthest from the rampart, with a rude line of stones; and faint traces of other lines of stones, intermediate between these and the stone edging which flanks the passages, are here and there visible. Otherwise, the rectangular areas present, to casual observation, only the appearance of a confused collection of stones. What use were they intended to serve? Were it not that, in both of the cases examined, the best side of the inner edging looks toward the wall, it might have been plausibly conjectured that it, and the intermediate lines of stones, were the footings of faces of a flight of easy stages provided for mounting the rampart. But, not only do the facts indicate an intention to leave a passage-way between the wall and its annexes; they indicate also that, along the greater part of its southern sweep, the rampart was too low to need the construction of such approaches as were not thought to be necessary in other places, where the wall was much higher. Whether, then, these sheets of stones are the remains of platforms for the piling of ammunition; or whether they were the sites of sentry stations; or whether they served some other purpose; may still be regarded as matter for conjecture.

17. Between two of these objects,§ is a piece of ruined wall, 2 feet thick, and less than a foot high, showing no indications of structure, projecting inward from the *agger*, at a right-angle, for the distance of 11 ft. 6 ins., to the centre of a round elbow, from which it returns, 6 ft. 6 ins., in a line parallel with the *agger*. It may originally have been longer: if so, the missing portion was probably destroyed at the time when this part of the hill was planted.[14] No light has been thrown on the motive for its construction: nor is it known whether it is ancient or modern.

18. Of somewhat similar shape on the plan, are the ivy-mantled foundations of a building,‖ erected at the edge of the *débris* in the south-eastern angle of the "keep", several

---

14 About 1815–20.

* Plate II: also Plate III, 17, 18, 19, 20, etc.

† Plate VI, figs. 1 and 2. ‡ *Handb. W.S.M.*, p. 103. § Plate II: also Plate III, 4. ‖ Plate III, 11.

Digitized by Google

feet clear of the original inner face of the rampart. Its origin and purpose cannot now be ascertained. Though not ancient, it may still be old. The remains consist of two walls, set at a right-angle, and now standing from a few inches to 5 feet above the ground. They are straight, and were tolerably well built with chosen stones, set in mortar, which has nearly perished. The external lengths are 29 feet and 14 feet respectively. The thickness varies from 17 to 19 inches. The two free ends are finished squarely; and do not appear to have been tied into other walls. Mr. Francis Poole testified that, about 50 years before the date of this exploration, as a boy, he and others used to climb to the top of these walls by means of large stones which projected, at frequent intervals, from the inner face of the work: that he thought the walls were then 8 or 10 feet high; and that the building was four-square: but he was not clear upon these points; and was ready to acknowledge that recollections of boyish impressions may have become unconsciously exaggerated. If, at that time, this building had been so conspicuous, it could hardly have escaped the notice of Mr. Bloxam, who, a few years later, sketched the walls close by. It was found that, near the ground, some projecting stones were still to be seen; but such were not visible in the higher part of the structure. There is but little fallen stone in the area: and hence, putting all the evidence together, it may be concluded that the masonry was of no great height. The woodman informed the author that he had understood that it was in existence before the hill was planted, and that the walls were regarded as the remains of a shepherd's hut.

19. The quality of the facing in different parts of the structure (often in places very near together in the same piece) varies greatly. Some of the boldest is seen in an exposure of one of the inner faces of the rampart, at a point about midway of its return around the northern side of the "keep"; but beneath this large work is a mass of wretched material.* A piece of walling, equal to any yet uncovered, is buried near the middle of the northern flank of the grand entrance;† and its *vis à vis* is a very good typical specimen of the better class of Worlebury-work, standing well above the mass of ruin with which the gateway is choked, and marking distinctly the line of its southern flank.§ From these, it will be evident that the whole structure, which is of a lower average of excellence than the portions selected for illustration, is of the most primitive character:—indeed, it is not possible to conceive of anything more rude than some of the walling which has been examined;—so miserably poor, that its artificial structure could be ascertained only by exposing considerable lengths of it, and finding that it preserved its line.[15]

20. A general notion of the sizes of the stones employed may be obtained by noting that, with scarcely an exception, the largest are about eighteen inches in diameter, and

---

15 It is more than probable that the greater portion of the superstructures, at least, of these walls must have been frequently repaired; and this may account for much of the irregular and inferior work.

* Plate VIII, fig. 5. † *Ibid.* fig. 4. § *Ibid.* fig. 3.

Digitized by Google

as much as a man can well lift; while vast numbers are not more than two or three inches across. Perhaps the average size may be about five inches.

21. It has often been asked, whether the stone with which the walls were built was or was not quarried. This matter was carefully noted during the whole of the explorations, which involved extensive openings into the mass of ruins; with the result that, with the exception of spalls, not a single stone was seen which did not exhibit at least one weathered side. There need, therefore, be no hesitation in concluding that the whole of the material was obtained, not by quarrying, but from superficial sources;—from the pits; from loose shakes in the rock; and, lastly, and chiefly, from the surface of the hill. Not a single tool-mark has been observed on any stone at Worlebury.

22. Mr. Jackson has noted, as a remarkable peculiarity, an incident in the walling which he regarded as characteristic, and describes in terms likely to lead a reader to suppose that it marks it as of a distinctive type. He says,*—"The walls are built on what may be called a præ-architectural system. In the facing, a large stone is surrounded by small ones, so as to form a rough circle. Round its circumference cluster others, and the visitor should remark how well this facing holds together."[16] This is a very misleading description of the character of the work, which is simply built with the materials at hand, with little endeavour to fit them together in the most stable manner. As the drawings show, there is absolutely no system in any part of the facing: here is seen a group of large stones, of all shapes, well or ill-bedded: there, a length composed of small ones: while, in another place, large and small are used indiscriminately, in a way, the *undesigned* result of which, in some instances, could not well be other than that which Mr. Jackson regarded as intentional and characteristic; and which he evidently was inclined to affiliate to the very different Pelasgic masonry of Greece and Italy.† Even if any comparison were admissible between this almost microlithic work and the magnificent mural remains in classic lands, it would rather be with the Cyclopian style of walling.‡

23. Mr. Jackson farther observes§ that "in certain eras certain modes of building were adopted almost all over the world;" and that "there is nothing so decisive as to the age of a place as its masonry:" also‖ that "there was really a difference of styles [of walling] at Worlebury." He says, moreover,¶ that "there is no building in Ireland approaching [in rudeness] to these rudest traces of the Gael;" and that "the camps in western Ireland were built in a later style." Now, "the idea that the style of a piece of rude, dry walling is closely indicative of its relative age, is purely imaginary. That there may be a difference between the walling executed by a people destitute of metallic tools, and some of that erected by a

---

16 *Cf.* his views on the easy destructibility of the facing, *supra*, 9, note 10.

* *Handb. W.S.M.*, p. 86.

† See Gell's *Topography of Rome*, 1834, Vol. I, pp. 205, 236; Vol. II, p. 91, *et al.* ‡ *Ibid.* Vol. I, pp. 100, 197, 198.

§ *Lecture*, 1860. ‖ *Lecture*, 1871. ¶ *Lecture*, 1860.

Digitized by Google

race possessed of them; and a still greater difference between the former and masonry set in mortar; is quite true: but (to confine our attention to the first case) there is positively nothing in one class of dry, untooled work, *per se*, which indicates a higher or a lower antiquity by comparison with another.[17] The difference between varieties of dry walling is necessarily regulated chiefly by the character of the stone, and by the use for which the structure is intended; also, in a minor degree, by the energy of the builders."* Hence, *if we are to judge by the character of the walling alone*, there is nothing to indicate whether Worlebury is earlier or later than the stone-built fortresses of Wales, Cornwall or Brittany, or the "duns" and "cahers" of Kerry and the South Isles of Aran, in the West of Ireland. The simple fact is, that, without using metallic tools, the builders of Worlebury could not obtain bolder or better-shaped stones than those which were used in the walls; and, hence, it would have been impossible, either for them, or for similarly circumstanced builders of any subsequent age, however skilful, to impart to the work a much better typical character—such as might be indicative of a later date. There is a difference of *quality* in the walling of Worlebury; not a difference of *style;* but the former is only such as would result from fluctuations in the supply of facing-material; from deliberation or haste in construction; from dilapidation and repair; and from the relative importance of various parts of the work. It must, however, be conceded that the walling of the rectangular chamber† is really of a class distinct from that of any other part of the camp. The stones were selected, and, after a rude fashion, laid in courses. From this, and from its regular form, it may be conjectured that this chamber is probably of later date than the fortress itself.

24. Another theory advocated by the same author—that the stone defences were supplemented by timber and basket-work—appears to be very improbable, although recommended by the high authority of Sir J. Gardner Wilkinson.[18] Mr. Jackson says‡:—

---

17 Scores of modern retaining and fence-walls may be seen all over the hill-sides in this district, which cannot be distinguished in character from the ancient walling at the camp.

18 *Journ. Brit. Arch. Assoc.*, 1861, Vol. XVII, pp. 3, 4. "The broken stones so frequently strewn over the summit of walls in ancient British camps, and on the slope toward the ditch, seem to have been used for securing the palisades, to which those camps were so much indebted for their strength, and which, firmly imbedded in the stones heaped upon their bases toward the inner side of the wall, could not be readily forced out by the besiegers. The palisades were further strengthened by being wattled, or at least bound together by wythies or twigs of trees, and the mound of stones had the additional advantage of presenting to the besieged a commanding banquette from which to hurl missiles on the enemy. The forcible destruction at a later time, of the palisades, and of the upper part of the vallum in which they were fixed, has caused the fall of that mass of stones, and accounts for the quantity so often strewed upon the ground beneath the walls, as at Worle, Carn-Goch in Caermarthenshire, and other places; and the same downfall of the crest of the agger in all other camps explains its present rounded form, and the accumulation of earth and stone upon its now sloping, but formerly precipitous sides, as well as in the ditch below."

* *Journal of the British Archæological Association*, 1882, Vol. XXXVIII, p. 404, note, art. on Dolbury and Cadbury, by C. W. Dymond, F.S.A.: also, *Proc. Som. Arch. Soc.*, 1884, Vol. XXX, part ii, p. 109, art. on Dolbury and Cadbury Camps, by the same writer.

† Plate III, 6; Plate VI, figs. 22, 23; Plate VIII, figs. 1, 2.

‡ *Handb. W.S.M.*, pp. 87, 88.

Digitized by Google

"On surveying the walls, which are very commonly about 35 feet high from the ditch bottom to the crown of the ramparts,[19] it became evident that wooden defences had been used in addition to the stone-work. There were means of fastening oblique stakes, so as to form massive *chevaux de frise*, and likewise for carrying wicker or timber defences along the tops of the ramparts." He adds*:—"Advanced siege arts were not improbably the cause of several after-thoughts at Worlebury, and amongst such additions may possibly be reckoned the employment of wooden and basket-work bulwarks." And, in another place, he thus writes†:—"Along this breastwork were found circular holes at regular intervals, like narrow rifle pits carried down to the ground. Their use was a perplexity to their first discoverers. Too deep and too strait for a fighting man, each of them seemed only a weakness to the line of walling which they severally penetrated. The only reasonable supposition is, that they were made to receive upright posts, so arranged as to carry along the top of the stone breastwork a wooden or wicker-work defence. A basket-work rampart of this sort surmounting a timber wall appears manned by Teutonic warriors on the Column of Antoninus. The Celts, and especially the British tribes, were celebrated for their skill in basket-work."

25. Of these holes in the "breastwork" (which, for convenience of description, are herein called "cups") it may be well first to say something. After the prolonged and repeated examinations to which the ruins have recently been subjected, no more than eight or nine hollows, having in any degree some of the alleged characteristics of these supposed dry wells, can be cited.[20] These were found spaced with no regard to regularity, and, in almost every case, at considerable distances asunder. In no single instance was it possible to say with certainty whether they were in the line of the parapet or in that of the rampart behind it. Moreover, all these cups were of the rudest possible character, varying from 2 ft. 6 ins. to 5 feet in diameter;—such holes as might be made in a single minute by extracting some of the top stones in parts of the ruins where, from various causes, the mass had become somewhat wedged together. In one or two instances, at first sight, the bottoms of these cups might seem to present some very slight appearance of being gathered into a rude concavity,—the interstices of the larger stones being choked with small material; but this might easily be—and doubtless was—accidental. Not the least trace of a walled lining

---

19 Mr. Jackson greatly exaggerates the height.

20 This number applies only to those hollows which, by reason of their dimensions and their alignment along or near the crest of the ruins, in so far correspond with the statement of Mr. Jackson. There were many other similar craters, large and small, scattered over the stone-heaps, on their tops and on their slopes, several of which (knowing their recent origin) the author caused to be obliterated.

And here it may be well to warn visitors who may not be aware of the vicissitudes to which these ruins have been subjected during the last generation or so, to be very careful not to take for granted that any striking superficial features, not evidently parts of the structure, are ancient. Within the knowledge of the writer, eminent and experienced antiquaries have been led astray by confounding the pillage of the modern builder, the toils of the poacher, or the sport of the school-boy, with the work of our painted predecessors.

* *Ibid.* p. 89. † *Ibid.* p. 102.

Digitized by Google

(technically called "steening") was observed; and none of the holes were sunk more than 2 ft. 6 ins. or 3 feet below the present crest of the *agger*, or were carried down to the ground, as is erroneously stated in one of the extracts quoted above. Had they been so, it must have been very easy to discover them.[21] Great pains were taken to obtain evidence of their former existence; and special enquiries on the subject were addressed to Mr. Jackson himself; but no satisfactory testimony has been forthcoming. Mr. Jackson acknowledged that his information was nothing better than hearsay; that these "pits" were not lined with any sort of masonry; and that Mr. Warre merely followed down one supposed pit by picking out what loose stones he could!

26. As to the theory that the ramparts of Worlebury were strengthened by palisading, it may suffice to offer a few practical reflections, to show that it is quite inadmissible. Such a fence would greatly interfere with the construction of the much more convenient, and easily repairable, dry stone parapet. Supposing, however, that woodwork was here resorted-to, as a preferable mode of protecting the defenders on the upper works, the alleged wells must have been not more than 9 or 10 feet apart; and, if so strait, as described by Mr. Jackson, the posts could not have been extracted without destroying the steening. It would, indeed, have been much easier, and all-sufficient, to have set them in extemporized holes; wedging them in with large stones. If possible, there is still less evidence of the use of oblique stakes on the terraces. That any means of fixing them are, or have been visible, must be incredible to all who have spent much time in the exploration of these ruins. One has only to remove the fallen material where it has become tightly wedged, to see numbers of deep, ragged hollows, often merely accidental, but occasionlly made by visitors, who, unfortunately, are too much given to picking holes in the work.

27. The truth is, that the whole theory of the use of such aids to fortification is quite inapplicable to structures of this type; and Mr. Jackson puts himself out of court by admitting that "advanced siege arts were not improbably the cause of several after-thoughts at Worlebury, and amongst such additions may possibly be reckoned the employment of wooden and basket-work bulwarks;"* while, at the same time, holding that the means by which these were to be fixed were such as could have been provided only in the original construction. With stone sufficient for building breastworks, which could be repaired almost as quickly as they could be pulled down, what need for a system of auxiliary defences which, in the hands of vigorous assailants, might easily become a ready instrument of demolition? That timber and basket-work was used in some of the military works of the

---

21 Fig. 4, in Plate VII, is a perspective view of the best-preserved of these cups. Its position, half-way down the steep slope of the ruined *agger*, flanking the north-eastern entrance, is, however, not such as to lend any strength to the supposition that it was a feature in the original work. Nevertheless a view of it is given, in order that the description may be easily followed. [Since the above was written, this cup has been destroyed.]

Handb. W.S.M., p. 89.

Digitized by Google

Britons, and their kindred on the Continent, is clear, from the accounts of them which have come down to us in the Latin authors; but I believe that there are no records of the use of wood-work in connexion with rude stone walls, except as bonding; and, as far as the evidence goes, only *earthworks* were strengthened by palisading: in which cases, the utility of such a mode of frustrating assault is obvious.

28. If it be hypothetically granted for the moment that these cups are genuine relics of ancient work, it will not be easy to divine the purpose for which they were made; although several theories might be suggested. For instance, they might have been destined to hold watch-fires during a siege. But this would expose them to rapid destruction by calcination; and none of them bear the least marks of fire, except the one near the ordnance-carn on the inner eastern *agger*, in which there are slight indications that it may, more than once, have been used for a pic-nic fire. Another conjecture might be that these holes were used, either by archers, or by watchmen. But it is hardly consistent with what we know of the valour of the early inhabitants of these islands, to suppose that the few, so accommodated, would skulk in any more complete shelter than that afforded to the rest of the garrison by the simple breastworks. In fine, I agree for once with Mr. Jackson when he says that they "seemed only a weakness to the line of walling which they severally penetrated." Just so: and, hence, we naturally ask for clear positive evidence before yielding credence to statements, based merely upon superficial observation, respecting alleged features, in themselves so inherently improbable.

29. Hoping to receive some fresh light upon this question, the author visited the noble camp on Carn-goch, near Llangadock, in Caermarthenshire, in the ramparts of which there were said to be a great number of similar holes.* Notes of the observations made on that occasion are recorded elsewhere;† the general conclusion arrived at being, that there is a total lack of evidence that these very problematical incidents are due to anything but dilapidation.

30. The same testimony appears to be given by all other Welsh camps of which we have any account. At Tre-ceiri, the noblest and best-preserved of them, there is nothing which points to the former use of timber super-structures: nor has anything like a cup or a well been found in any part of the least ruinous portions of the rampart; for a description of which, the reader is referred to the Appendix to this chapter.‡

31. In the year 1880, shortly before the recent exploration was begun, some unauthorized person made a foot-path over the top of the principal *agger*, between the inner end of the grand entrance and the point marked 10 on the Index-plan,§ by piling up the large stones on either side, and macadamizing the bottom. The attention of the owner of the property having been drawn to this, he courteously ordered that the work should be reinstated, as

* *Arch. Camb*, 1860, third series, Vol. VI, pp. 97–104.

† Appendix to this chapter, Cup-pittings in Ramparts, par. 32. ‡ Par. 8. § Plate III.

Digitized by Google

nearly as possible in its former condition, under the superintendence of the writer. The fact is here noted, in order that future explorers (if such there should ever be) may not be misled by coming on the track of this modern interference with the ruins.

THE ENTRANCES AND PASSAGE-WAYS.

32. This camp had three entrances, of each of which distinct traces remain. The principal one was in the re-entrant angle, near the south-western corner of the "keep". Another was at its north-eastern corner; and the third, at the western end of the *enceinte*. Full descriptions of these features will be found at the end of the following notices of the various passage-ways in and about the camp.

33. At the present time, there are four other well-marked foot-paths, through and over the *aggeres*, by which access to the area may be gained. It has been wrongly supposed that some of these are coëval with the camp itself; while others (with little reason) have been regarded as the remains of breaches made during an assault. All have been carefully examined; and, where their origin has not been ascertained by an appeal to living testimony, it has been proved to be recent by tracing the continuity of the walls and ditches across them.

34. Some strong superficial indications afforded by a curved flanking return of the top of one of the wall-faces at the inner end of the south-eastern foot-way to the "keep", coupled with its position, led to an anticipation that it might prove to be an original entrance; but clearings under the surface of the *débris* demonstrated that the supposition was wrong.

35. At the point marked 7 on the Index-plan,* a flight of bold, rude, weathered stone steps is laid for a considerable distance up the slope of the *agger;* and the inner edge of the *débris*, on one flank, is neatly curved to a quadrant, as though to meet them. It scarcely needed the testimony that these steps over the ruins were laid down a few years ago to accommodate an inhabitant of one of the neighbouring houses, to prove that they could have formed no part of the ancient work. At this point, there was no interruption of the continuity of the original wall-faces, which were traced across the path. Similarly, other paths have been made for the convenience of residents who have direct access from their gardens to the borders of the camp.

36. One other only of these gangways† claims notice, because of the importance attached to it by Mr. Warre, who seems to have regarded it as the great breach through which the camp was stormed; and who thought that he found corroboration of his notion in the existence, immediately within it, of a work which he called a "retrenchment".‡ Others have imagined the breach farther toward the east, and have extended its width, so as to cover "some five-and-twenty yards in front" of the rectangular pit-chamber.§ Now,

* Plate III. † Plate III, 1. ‡ *Ibid.* 2. § *Handb. W.S.M.*, p. 104.

Digitized by Google

with regard to these supposed breaches,—one of them so narrow as to afford space for only a single file to pass into the camp,—a little reflection will suffice to make it clear that assailants attempting to clear such a passage-way, prior to delivering an assault, would expose themselves to the risk of annihilation. Indeed, it would be quite foreign to the primitive modes of assault practised by people not in possession of battering engines, or besieging a place where these could not be used, to make such breaches. As to the "retrenchment",—which is nothing but a rude, irregular hollow, about two feet in depth, partly sunk into the loose rock, perhaps for the purpose of getting stone,—it could by no means have been extemporized to cover a breach hastily made in the walls; nor would it have been of any use in retarding the assault. But these "breaches" really make little difference in the general aspect of the ruins at that part: for, from the extreme western end, to a point somewhat to the east of the rectangular pit-chamber, the present height of the *agger* is nearly uniform, being, at the most, but two or three feet higher than the ground within. That this is not the result of exceptional dilapidation, will be evident, when it is observed that the width of the ruined mass, along this length, is not greater than it is at other parts where the original structure still stands many feet higher; and that the depth is considerably less. The conclusion must be, that this portion of the wall was always much lower than that which defended the "keep" and its approaches;—perhaps never more than parapet-high above the *enceinte*. While it is not unlikely that the principal assault may have been delivered on this side, it is most improbable that any hasty methods of reaching the interior should have left their mark behind them.[22]

37. The zig-zag path, crossing the outer ditch, by which the western gateway is now approached from the road just below, is modern. So are the terraced ways made to facilitate passage over the ruins. One of these is carried diagonally up the slope from a point opposite to the corner of the garden of Penwartha to the gap forming the western gateway. Another crosses the outer *agger* of the "keep", over its south-eastern bend.

38. It remains to notice the main ancient approach which wound around the southern side of the hill, leading to a point where it bifurcated; one branch recurving up to the grand gateway; the other passing on into the south-western angle of the "cattle-fold". A length of this ancient road, with its escarped rock on the northern side, may still be seen in the gardens of Petra-villa, and adjoining properties. Mr. Jackson was told by an old fisherman that, before the houses in South-road were built, this ancient way could be traced from a point "opposite Sutton House," from whence "it branched upwards as late as 1857, at a point still marked by a thorn tree on the lawn of Rock-house, about 25 paces to the east of Trinity church."*

---

[22] For remarks on the causes of the ruin which has overtaken the works, see, *infra*, par. 48.

* *Lecture*, 1871.

Digitized by Google

39. At the place marked 12 on the Index-plan,* the cliffs are perforated by a small passage, now choked with soil, but known to have been large enough for a boy to pass through. It occurs in a shake of the rock; and may be merely natural. But it may have been intentionally worked out. In either case, it provided a secret way, which could be used in addition to the four other practicable passages through the cliffs.[23] One of these (perhaps the most difficult) is just below the western gateway, giving direct access to the spring.† The next in order (and the easiest) is that through which Section 3 is carried.‡ The third is 130 feet to the west of No. 12; and the fourth is a little to the west of the northern end of the transverse fosse.

40. *The Grand Entrance.* The position and form of the grand entrance are clearly shown in the general plan;§ a detailed plan and section of the structures on the southern side of it being given in another plate.‖ Those on the northern side were somewhat similar, though less complex. On that side, the gateway[24] was bounded by a wall of very bold material, (more than twenty feet of which was found in ruins), with a semi-circular wing, or shoulder, at its inner end, inclosing the northern flanking work. The wall forming the southern side of the gateway still in part stands about 6 feet above the ground. Originally, both it and its *vis à vis* must have been higher. The superficial width of this gateway is 13 ft. 6 ins., except where a concavity on each side increases it to 15 ft. 6 ins. A slight batter of the walls would, perhaps, make the width at the ground-level six inches less. No transverse barrier, or other means of closing or narrowing the passage, has been found. At the eastern end of the ruined portion of the northern flanking wall, a length of 9 feet of very rough pitching continues the line to one of the protected *agger*-walls which, in a few more feet, becomes ruined and lost. Below this is the outermost face which, as the plan shows, quickly runs into the flanking wall with a sharp reversed or ogee curve. The natural soil forms the floor of the gateway. In addition to the *débris* which covers the slope immediately below it, the whole of the passage is choked to the depth of from 3 to 4 feet with a mass of stones which must have come from the flanking upper works. The original form of these superstructures can only be conjectured; but, certainly, they must once have stood several feet higher than the present top of the ruins.

---

23 There used to be a notion, accepted by Rutter, and still surviving, that this hole was the entrance to a subterranean passage issuing at the bottom of the northern steeps. A short adit was pointed out to the writer, at the inner edge of the upper road, just above the spring, which his informant regarded as the other end of the supposed drift. The distance between the two points is 13 chains; and the direction at right-angles to the shakes. Moreover, such a drift must have been pierced through the solid rock, with a declivity of one in four. The idea is quite preposterous; and, indeed, the writer found that the adit leads merely to a sand-pocket in the rock, now partly choked by the falling in of the roof. Plate III, 37.

24 A gateway does not necessarily possess a moveable gate.

* Plate III. † See *infra*, art. Water-supply. ‡ Plate III; and Plate IV, fig. 3.
§ Plate II. ‖ Plate V, figs. 1 and 2.

Digitized by Google

41. *The North-eastern Entrance.* A plan and a transverse section of that part of the north-eastern entrance which traverses the inner and principal *agger*, have been drawn in detail;* and most of the particulars of it will be found recorded elsewhere.† Referring to this for a statement of the facts of construction, it will be noted that the width of this gateway may be fixed at 11 feet, if, as is probable, it reached across from the newly discovered flanking wall on the southern side to the farther edge of the four large kerb-like stones on the opposite one. But the whole of that part presents a problem difficult of solution. The sudden scooping out of the ground under the edge of the *débris* has yet to be explained; as that half of the road has not been embanked. There is also an unsolved mystery as to the non-existence of any flanking wall on that side. The four large stones can hardly be the footings of a part of such a wall, for two reasons: *first*, because their best faces are away from the road, and toward the *agger;* and, *second*, because this theory would still leave it unexplained how the footings eastward of these four stones, which must have been sunk deeper and protected better, have totally disappeared. The author has not left unconsidered the alternative supposition that there was no ancient entrance here; and that the said kerb-stones are the remains of the footings of the endmost retaining-face of a series of stages across the steeply-inclined end of the eastern rampart, as it dipped toward the northern return. The chief reasons (among others) which tell against the adoption of this explanation are: *first*, that it is unlikely that a modern road would be carried through so great a mass of stones as, according to this supposition, must have been removed at this point;—a labour which could easily have been avoided by skirting around the foot of it, a few feet farther to the north; *second*, that nothing remains on the site which would account for the disposal of the stones thus removed; and, *third*, that the terraces on this steep plunge of the wall would probably be too aslant to afford safe standing-room.

42. *The Western Entrance.* Referring to the plan‡ and detailed description§ of this entrance, it may be remarked that it also has certain features not easy of interpretation. For instance, the steps which occupy a portion of the opening cannot be called a necessity of the situation. The slope is gentle, and very easy to be traversed; and the only apparent reason for the existence of the steps is that they are set in its steepest part, just at the head of a shallow grassy hollow which extends between them and the gap in the rocks just below. The steps have always been regarded as ancient; and to assume that they are modern, would not relieve the problem of any of its difficulty. With respect to the sheet of stones covering the shallow depression between the grassy passage-way and the wall-footings, the most plausible conjecture might seem to be that it was the seat of perhaps three transverse stepped stages at the end of the rampart; were it not for the awkward facts; *first*, that there are no traces of the footings of either of the supposed intermediate wall-faces; and, *second*,

* Plate VI, figs. 19 and 20. † Descriptive Index. ‡ Plate VI, fig. 21. § Descriptive Index.

Digitized by Google

that the wall at this point would seem never to have been high enough to need to be terminated thus; for the ruins are level with the ground within; and the mass of *débris* is very small. Another conjecture might be, that the stoned portion formed a chariot-way: but why this strip should have been macadamized, when the rough hill-slope below was untrimmed, is not evident. Indeed, the assumption that wheeled vehicles were introduced at this point will hardly hold good, when regard is had to the ruggedness and abruptness of the declivities at this end of the hill. Besides, such a theory would involve the absurdity that the builders of Worlebury were no wiser than that man who made a big hole for the cat and a little one for the kitten!

43. It is evident that two of these entrances were available for chariots; and this indicates that such vehicles may have been used by the tribes in this part of the country. If this supposition be set aside, it will be difficult to explain why the gateways were not, for security, made much narrower.

THE DITCHES.

44. It does not appear that any examination of the ditches, or other outworks, was made by the earlier explorers, who appear to have formed their conclusions thereon, for the most part, solely from superficial observation. The author opened them at every critical point,—clearing out the material with which they were choked, so that the cross-sections might be accurately ascertained.

45. The structure of the southern portion of the fosse which separates the "keep" from the rest of the *enceinte* is clearly shown and described.* It is not apparent why it was sunk to so great a depth,—much greater than was necessary for its efficiency as a fosse. While removing the great mass of stone with which it was encumbered, the first idea which presented itself was, that it might have been used as a vaulted chamber. But, on completely exposing the bottom, it became evident that this notion was untenable,—for several reasons. Nothing yet discovered in the whole of the camp affords the slightest evidence that its builders were capable of executing such a piece of work; and, even if they possessed the skill, the materials are too rude and ill-shaped to be used for such a purpose. There is no trace of roofing, or of any abutments from which it could have sprung. In such case, the western battering wall would not have been carried up to its present height; and the opposite side would have been constructed to match the other with some approach to symmetry. Finally, the bank on that side would have been cleared away, to enlarge the area of the floor, the width of which, it will be seen, is very much straitened. Even if roofed in with poles and wattles, the shelter would be of the poorest, and the accommodation of the slightest. A suggestion that this hole may have been used for storing water, is plausible; but may be met by stating that there is no sufficient water-shed; and that no remains of

* Plate VI, figs. 24, 25, 26 and 27; also Descriptive Index.

Digitized by Google

puddling were found. It would have made an excellent approach to a sally-port; but the good retaining-wall at its lower end bears no marks of having been perforated. In fine, no explanation has been advanced which will account for its apparently unnecessary depth. The difficulty of finding a solution of the problem is increased by studying the remaining parts of this fosse. The longitudinal section, before referred-to, shows how rapidly the bottom rises toward the north. From the upper end of the section, to the point where the principal central modern foot-path crosses it, the fosse is excavated only to the depth of 3 or 4 feet, being carried, in an irregular line, and with broken or sloping sides, through a wide shake, leaving, here and there, exposures of rock. Not the least trace of walling is visible in this portion. The third division extends for more than half the total length of the fosse, *viz.*, from the aforesaid bush-path, still northward, to the brow of the cliffs. Throughout, it is nothing but a succession of wide, shallow, gently-undulating depressions of the surface, at the most a few inches in depth,—still, apparently, on the line of a shake, and, like many other such hollows in the area of the camp, probably altogether natural; for, on sinking trial-holes, it was found that these hollows had never been deeper than they now are. Hence, they cannot have been of the slightest use for defensive purposes. One explanation—and only one—presents itself; and this is, that, while it was intended to cut a ditch entirely across, for some unknown reason, the work was left incomplete.[25] The pit sunk in the bed of the middle portion of this ditch is a singular feature.

46. The principal exterior ditch was carried around the foot of the outer rampart of the "keep", and, after an interruption at the approach to the grand gateway, was continued, without any other break,[26] in a rather different form, along the southern declivity of the hill, at a distance, varying between 40 and 60 feet, from the outer face of the rampart. Its depth is usually about 4 or 5 feet; and its section varies considerably in different places, as may be seen, on reference to the plates.* Almost everywhere it is full of stones to the brim; and, consequently, the lower and outer edge of the *débris* is often sharply defined. For a considerable length on the concavity of the hill-contour, as shown in the plan,† a bench, from 3 to 4 feet in width, with a little rocky scarp above it, has been leveled along the northern side of this ditch. In other parts, the bench is either partially hidden, or gives place to a narrow sheet of small stones, having, here and there, a serrated upper margin.‡

---

25 At Old Sarum there is a radial bank and a ditch, which, inasmuch as it is unfinished, resembles the fosse here described. At Old Sarum "the cross-ditch in its breadth, depth, and irregularity, much resembles a quarry: and very probably was opened to supply material for the hearting, or substance of the castle-walls. Of course the object of these banks was to shut in the church, and to prevent the whole outer wall being taken by a *coup de main*." (*Jottings on the Stonehenge Excursion*, by E. T. Stevens, F.S.A., 1862, p. 27.) There is nothing in the Worlebury fosse which indicates that it was sunk for the purpose of obtaining stone.

26 The apparently solid passages across this ditch, over which pass the foot-tracks leading to the inclosure, are all (as has been shown, *supra*, 32) the results of modern filling.

* Plate V, fig. 5; and Plate VI, figs. 3, 4, 5, 6 and 7. † Plate II. ‡ Plate II; also Plate VI, figs. 7, 8 and 9.

Digitized by Google

47. The spindle-shaped patch of stones,* on the slope below the rocks, just outside the western entrance, must be regarded as a prolongation of this second line of circumvallation.

48. Can these defences be ideally restored to their pristine form? For the most part, I think, they can. There is no mystery about the portion of the ditch defending the outer rampart of the "keep"; so our attention may be turned to that which is to the west of the grand gateway. It would be very uncomplimentary to the builders of Worlebury (rude though they doubtless were) to suppose them so lacking in sense as to cut, with much toil, a deep and long ditch, only to fill it again with a mass of stones. On consideration, it must be quite evident that these have been thrown in since the ditch ceased to answer the end for which it was made: and this can have occurred only in one of two ways:—either the stone was brought from elsewhere, deliberately, and with much labour, to choke the excavation; or it has fallen, or has been thrown into it, from some breastwork which formerly stood upon the bench at its upper edge. That the ruin is derived from the latter source, is almost certain, when regard is paid to local indications, and to the whole analogy of the works. It remains, then, to discover whether what we now see is the work only of *Tempus edax rerum*, effecting casual dilapidations through the centuries; or whether it is the result of deliberate design. The author has no hesitation in advocating the latter hypothesis, which leads to the inference that the bulwarks must have been overthrown, and the ditches, as far as possible, filled-up, after the place was taken by assault. He has been led to this conclusion by observing the utter ruin that has laid low all the parapets and subordinate breastworks, (of which not a single stone seems to remain *in situ*); the general obliteration of the upper works; the equal distribution of the *rudera;* and the systematic and uniform manner in which the ditches are filled to their edges—neither more nor less. The ancient breastworks, along the ditches, were, doubtless, simple walls, faced and backed with dry revêtements; to account for which, there is a sufficient quantity of bold material mingled with the fallen masses. The reason for spreading the sheets of small stones, (referred-to in paragraph 46), on the slopes behind certain parts of the ditch between the *agger* and Penwartha, is not evident. Suffice it here to say that, in several places, they must have reached a few feet up the slope, behind the back of the breastwork. Reference to them is again made in another place.†

49. Of the outlying ditches that seamed the southern slopes of the hill, there are now but few remains; and these may be found on the open space to the east of the garden of Penwartha. They were not deemed of sufficient consequence to demand exploration: but, as they, too, are practically filled up with stone, there is no reason for doubting that they followed the analogy of those just described, though, perhaps, on a smaller scale. Mr. Martin Atkins' plan indicates that, in many places, they were discontinuous.

---

* Plate VI, figs. 16 and 17. † *Infra*, par. 55.

Digitized by Google

50. The series of parallel *valla* forming the immediate outworks of the double ramparts of the "keep", like all the others, are now much shallower than they originally were; being partially filled with stone. These, too, for the reasons already adduced,* can be no other than the ruins of structures which (if we may form an opinion from the size of the stones, and from the narrowness of the intervals between the ditches) must have been carefully piled, and, perhaps, regularly walled breastworks.[27] If the crests of these originally stood 4 feet above the ground; and if the ditches in front were uniformly (as, in several places, they were found to be) 5 feet in depth; it is easy to see that these outworks may have been very formidable. On reference to the plan,† it will be observed that one of these ditches is interrupted by a well-defined gangway. At this point, the rock has not been cut through; but whether designedly, or from necessity, is not apparent. It will also be noticed that the innermost of these ditches, unlike the others, sweeps south-westward, around the outer *agger*, to a point where, by a sharp bend, quite full of stone, it suddenly runs into the *agger*-ditch.

51. An examination of the *valla* of the "cattle-fold" led to the same conclusion as to the original character of the outermost defences, of which they were a part. Everywhere, the beds of these ditches are encumbered by stones, a considerable proportion of which are of large size. In two places, where the depth of the mass was tested, it was found to be 8 ft. 6 ins. There is no reason for supposing that the condition of these ditches varies much in different places; and the evidence is as strong here, as in the other cases, that their depth from the surface of the ground was about 5 feet; and that they, too, were strengthened by stone breastworks;—perhaps regularly built, but, in this case, on account of space, not necessarily more than banks of loosely-heaped stones. Not a single bit of walling—not even a footing—is anywhere to be found: the destruction has been too complete. A very slight embankment, here and there about a foot high, generally runs along the western sides of these ditches; and, occasionally, a still more faintly-marked one may be detected on the eastern sides also. No embankment is attached to either side of the ditch forming the southern boundary of this inclosure, which, however, like the rest, is partially filled with stone. The plan‡ shows a "solution of continuity" in each of the two "cattle-fold" ditches on the northern slope of the hill. This occurs at the brow of a very abrupt declivity, below which, at a short distance, the ditches re-appear, though still on a steep slope.

52. Mr. Jackson has propounded an opinion§ as to the use of the ditches of Worlebury which can at least claim the merit of originality. It is that they were intended "to break the wheels of the chariots" of the enemy, "and the legs of their horses"!! Strange weapons to be launched against lines of fortification, even in the fury of the most headlong assault!

---

27 This does not accord with the opinion of Mr. Warre who, however, had not the advantage of being guided to his conclusions on this part of the subject by the light which could be thrown upon it only by actual exploration.

* *Supra*, par. 48. † Plate II. ‡ *Ibid.* § *Lecture*, 1860.

Digitized by Google

53. It has been suggested to the author by an antiquary,* well acquainted with the stone fortresses of North Wales, that, because external ditches are, so far as is known, not a feature in their defences,[28] it is probable that those at Worlebury did not form a part of the original design, but were added long after the inner works were built. While it may be conceded as possible that this was so, the evidence seems rather to negative the supposition. With general reference to ancient camps, occupying sites on a geological formation consisting of stratified rocks, more or less disturbed near the surface, the presumption would be that, while adhering to some pre-arranged general plan, there would be an endeavour to economize labour by tracing the ditches along shakes and through the looser parts of the rock. In such case, most likely, these would be the first works to be executed: the lines of walling being made to accommodate themselves to those of the ditches. Sometimes, too, it would be from these that the bulk of the building-stone would be drawn. But, to assume that Worlebury was originally ditchless, is to assume that the primitive single inner line of defence was so luckily laid out, that the outer ditches could be subsequently cut in parallel lines, through accommodating strata. It is also to assume that the second rampart of the "keep", with its outer reinforcements, did not form a part of the original plan: for, in every case that has been examined, such compound lines of circumvallation are always strengthened by intermediate ditches: and if these *valla* were coëval with the main part of the work, it is probable that the ditches also were of the same date. In the present case, there is yet another reason for adopting this conclusion. If it be true that the ditches were strengthened by walled breastworks, it seems to imply that the quantity of available stone (which, without resort to quarrying, was not unlimited) was so economized as to suffice for all the works. Had there been any considerable interval of time between the building of the great walls and the cutting of the ditches, the presumption is, that all the stone would have been used in the earlier works, leaving none for later additions.

THE DETACHED TRIANGULAR PATCHES OF STONES.

54 Until a rational explanation of the use of these objects shall have been proposed, it is preferable to designate them by words which are simply descriptive of their present appearance. They seem to have been noticed first by the late Mr. Martin Atkins; and, by him and the early explorers, they were regarded as being the remains of "slingers' platforms,"—a name by which, since that time, they have generally been known. Unfortunately, almost all of them have disappeared;—by far the larger portion having been destroyed in making the gardens behind houses in the South-road. A few of the

---

[28] He had in view only some of the grander mountain-fortresses.

* Rev. Hugh Prichard.

Digitized by Google

larger ones, laid down on Mr. Atkins' plan, have been disturbed by planting trees; and others have become so overgrown by scrub as to be no longer recognizable. A group which he marked as existing 48 years ago, on the northern slope of the hill, are now—and, perhaps, were then—nothing more than sheets or streams of stones, with angular upper edges.

55. The general features of these objects are thus described by Mr. Jackson, but with that inattention to accuracy which, unfortunately, characterizes most of his statements about Worlebury*:—"Many triangular platforms were found scattered in assailable positions, apparently for archers and slingers on outpost duty. The points of these platforms were buried in the hill; their faces were steeps of masonry about breast high, deepened by ditches in front, which remained, and most likely made loftier by palisades which had perished." In this misleading description, Mr. Jackson seems to confound together two classes of objects which (though they may have had some common use) should have been treated separately:—(1) the detached triangular patches, and (2) those sheets of stones along the inner edge of some parts of the principal ditch,—and, apparently, along short lengths of outermost ditches, now destroyed,—having, here and there, a serrated upper margin. These latter—which alone were ditched and, possibly, faced with breastworks—have already† been dealt with in connexion with the ditches. The former—which are the subject of this section—shall now be described.

56. Two of the detached, well-marked, triangular patches of stones (and two only) were fortunately found, in 1881, still existing close together.‡ Leaving the most perfect one intact, the other was trenched through, to ascertain its section.§ There is no good reason for doubting that the triangular form of these curious objects was that which many of them originally possessed. It may safely be asserted that to none of them was attached the ditch which Mr. Jackson so erroneously describes as strengthening their "faces." Nor is there the least sign of the former existence of breastworks upon them. Nor were their points "buried in the hill," as they must have been had they been level on the top. Therefore, whatever else they may have been, they certainly were not "platforms." Had they been destined for such a purpose, they would either have been steps cut in the hillside and perhaps macadamized; or their bases would have been in the rear, at the ground-level, and the points in front, redan-like, forming salient angles, which could be revêted after the usual manner. Mr. Atkins expressed himself cautiously with reference to these singular outworks; and it is much to be regretted that antiquaries should have borrowed the name, and accepted the theory, so hastily applied to them, without taking the easy precaution of examining their structure and studying their analogues.

---

* *Handb. W.S.M.*, p. 88. † *Supra*, pars. 46 and 48. ‡ Plate III, 29 and 30.

§ Plate VI, figs. 10 and 11. *Cf.* figs. 7, 8 and 9.

Digitized by Google

57. But, while unable to regard these objects as the remains of platforms, the author is not prepared to suggest any theory in explanation of their use. Even if it could be supposed that they were laid down to mark slingers' stations, it is not easy to see why they were made to take this particular triangular form: and, certainly, none of them would secure a standing more firm and convenient than that bad one furnished by the rough hill-slopes. It has been stated that great numbers of "sling-stones" were found on or near these triangular patches, as well as on the wall-terraces: but, possibly, the platform-idea may have caused the early investigators unconsciously to magnify the number and significance of these 'finds.' During the recent work of exploration a few of these beach-pebbles were found among the ruins. Several of them were broken, as though they had been used in the attack,—as, indeed, many of them probably were. It is no more than might be reasonably supposed, that a prudent people should provide piled stores of such pebbles in convenient spots, to serve as ammunition in the event of a siege: but it would be wonderful if, after the sack, and the lapse of so many centuries, any trace of such stores should now be visible.

THE TALUS.

58. This term is used to designate the broad sheets of stones encumbering a considerable portion of the declivity below the range of cliffs, from which the material was doubtless detached in some forgotten age. It has been a moot point whether these merely rest where they found their natural beds of repose, or whether the hand of man may have had some share in their distribution. Previous to the recent examination of this *talus*, there were no data confirming or confuting any theory of its artificial arrangement. Nor can it be affirmed that we are yet in a position ideally to restore these sheets of stones to their original form;—if, indeed, it be safe to assume that they were ever otherwise than as they now are. To put the reader in possession of all the essential elements of the problem, the following remarks are added to the statement of the principal facts which is given elsewhere.*

59. On reference to the plan,† it will be observed that much of the upper edge of this *talus* follows a very tortuous line, having no harmonious relation to the contours of the ground; and that, at a few points, it is deeply notched. It has been assumed that these incidents mark the positions of passages across or through the defences. It is not evident why such passages should be required; and it seems more rational to conclude that they are due to natural causes. The edges of the one below 12 on the Index-plan were traced, with the result that, on the east side, the escarpment[29] continued from the upper edge of

[29] One of these hollows, shown in the plans, may be seen by the visitor to Worlebury at the extreme western end of the *talus*. When the adjoining road was made, its toe was cut through, and most of its contents were drawn out, and used for road-stone. The hollow is now nearly empty; and, with some variation due to the greater steepness of the ground at that part, exemplifies the general condition of the corresponding parts of the bed of the *talus* elsewhere.

* Plate VI, fig. 15; and Descriptive Index. † Plates II and III.

Digitized by Google

the *talus* into the recess; gradually becoming shallower until it disappeared at the return of the curve. It did not reappear at the opposite border of the recess,—which was simply defined by the margin of the sheet of stones,—nor, working up-hill, was it again found until the curve was turned at the upper edge of the next broad patch to the west.

60. Now, the slopes at the foot of the cliffs are so steep, and the cliffs themselves present such a formidable obstacle to assault, that, if we are to judge solely from a comparison with other similar situations, it would be to pronounce against the probability that anything had been done, or required, to strengthen defences on this side which were so strong in themselves. Except in one or two particulars, the sheets of stones have the appearance of a natural *talus*. Their breadth is everywhere proportioned to the height of the impending cliffs; and it is almost certain that the whole of the material has come therefrom. The convexities of the upper edge are not contoured around the hollows of the slopes, as would have been done in the case of an artificial work: on the contrary, they rise over the swells between these hollows; and every notch, or passage-way, is nearly opposite to some break in the cliffs. So far, everything leads to the conclusion that the *talus*, in its general present form, is due solely to natural causes. Among these may, perhaps, be included even the deep scooping of the ground along the upper edge of the convexities of the sheets of stones: for observations upon similar escarpments in other places tend to confirm an impression that these hollows have been produced by landslips caused by the great weight of the superincumbent masses of material, started, perhaps, from their former position of repose by heavy floods or by an earthquake. To say that they were excavated by hand, is to make it necessary to explain why so much labour was wastefully expended in removing a large quantity of earth, to improve, to so very small an extent, the defensive capabilities of the slope: the work, too, being the greatest opposite to the most unassailable parts of the cliffs. But, farther, it must not be forgotten that, before an excavation so deep and so uniform throughout its whole extent could have been made, it would have been needful, in the first place, to remove nearly the whole of the stones. Yet, while the evidence certainly seems to compel the conclusion that the phenomena of this slope are, in the main, of natural origin, there are one or two features suggesting that some trimming and adaptation may have been effected. Usually, a *talus* reaches up to the foot of the cliffs: but here, all along the higher slopes, there is a belt, of nearly uniform width, free from stones, which looks as though it may have been purposely cleared, so as to leave a passage-way for the defenders. If this were the case, the material, not required for the ramparts, would probably have been thrown upon the masses below; causing that slight heaping of the upper part of them which is seen in the representative section.* Farther, it is quite possible that the somewhat leveled, and apparently macadamized benching along the upper

* Plate VI, fig. 15.

Digitized by Google

margins of the stones may have been made for the convenience of archers and slingers. This conjectural adaptation of some of the natural resources of the spot is the condition referred-to near the beginning of this paragraph, which (for whatever it may be worth) may modify an unqualified acceptance of the theory that what we now see is wholly inartificial.

61. Similar sheets of stones are spread upon some of the slopes of St. Thomas' Head, which, from their secluded situation, must have been less liable to disturbance than were those at Worlebury. For an account of these and other analogues, see the Appendix to this chapter.*

THE PITS.

62 We now come to one of the most interesting features of Worlebury—the pits which are sunk in the floor of the *enceinte*. In this place the notice of these is restricted to an account of their number, grouping and physical characteristics: the story of their exploration, and the deductions to be drawn from a study of the relics found therein, being set forth elsewhere.† With few exceptions, pits occur only in the eastern half of the inclosure. They are 93 in number; 74 of them being in the larger division of the area, 1 in the transverse fosse, and 18 in the "keep".[30] On reference to the plan, it will be seen that they often range in lines, sometimes running east-and-west, and sometimes nearly north-and-south;—a circumstance due, perhaps entirely, to the occurrence of shakes in the rock, regulated by stratification and cleavage: for, on inspection, it becomes clear (as might be anticipated) that the forms of the pits were thus ruled; and the alignments usually take corresponding directions. The pits vary in size, from one of the smallest, which is rectangular, 3 feet in length, and 2 ft. 6 ins. in width, to the largest,‡ which is triangular, sunk almost entirely in the rock to a depth of at least 6 feet, and with vertical sides measuring respectively 10 feet, 9 feet and 8 feet. Commonly they are about 6 feet across; and the most frequent shape is a rude rectangle. In the ragged, looser rock, there appears to have been an endeavour to make them circular. The depth varies from 3 feet to 6 feet; the most common depth being about 5 feet. All these pits were sunk through the overlying soil into the upper portion of the rock. This, in the majority of cases, is within 2 feet of the present surface (which may be higher than it anciently was), and is usually greatly shattered. The reader who has consulted the *Handbook of Weston-super-mare*, frequently quoted herein, may be misled by a reference which its author makes to "occasional remains of sloping descents into the pits."§ In one or two instances, descent into a rock-pit is slightly facilitated by an accidental depression in its lip; but that is all. There is no evidence that any artificial ramps or steps

30 Many more than these appear in the plan: 41 shown therein are, however, not truly pits, but mere pittings, sometimes presenting to the eye an artificial appearance; while they are often small, and always shallow.

* Art. *Talus*, pars. 36, 37 and 38. † Chap. III; Descriptive Index to Plates IX, X and XI; and Chap. V.

‡ No. 13 on Index-plan. § *Handb. W.S.M.*, p. 80.

Digitized by Google

were cut for this purpose; and it is hardly to be doubted that, in most cases, access to their bottoms must have been gained by means of moveable ladders.

63 At 8 on the Index-plan will be found three pits grouped so closely together as to suggest the idea of a community of interest in those who used them. The partition of rock separating two of them is barely 2 feet in thickness; and the third being only 3 feet from the middle one, it is easy to imagine the whole group under cover of a single roof.*

64 With one exception only, (number 9 on the Index-plan),† these pits exhibit nothing but exposures of soil and rock. That exception is remarkable. It is possible, though not probable, that others may have been similarly lined.[31] So far as the author's inquiries have extended, this pit finds its analogues only in some on Walton-down, opened by the late Mr. Long.‡

65 Mr. Warre speaks§ of the "circles" (the ring-embankments said to have once surrounded the pits) as being 28 to 30 feet in diameter; and regards them as undoubtedly the foundations of ancient huts. Although traces of these embankments seem to have been then in existence, they must have been very slight; for, at the present time, nothing but a very indistinct bank is here and there to be seen; and, probably, this is chiefly—perhaps, in some cases, entirely—formed by the rubbish thrown out of the pits when they were opened by Mr. Warre and his associates. There may have been a low ring-wall, the materials of which were cast into the holes when the place was destroyed; but nothing of the kind appears to have been seen in modern times,[32] notwithstanding assertions to the contrary made by inaccurate compilers; and, surely, Mr. Jackson speaks without sufficient warrant when he asserts‖ that "the hut circles generally drawn, each round the mouth of its own pit, have left very definite records behind them;" and, farther, that they were marked by "drainage channels".

66. In reply to these objections to some of the testimony of the past, it may be alleged that evidences of human handiwork, which formerly may have been distinctly

---

31 As the destruction of the lining could have been effected only by its removal from the top downward, the well would be partially filled with stones before the lower part of the steening could be reached; and, so protected, this would remain, in evidence of the former existence of the stone-lining. But there is nothing to indicate that such footing-courses were seen in any of the other pits. The final incidents of their history (discussed in a later part of this work) strengthen the argument, and confirm the conclusions here drawn from it.

32 Unless we except some remains of walls seen by Mr. Bloxam, when he visited this camp in the year 1845; and which, immediately after writing of the pits, he thus described in the *Archæological Journal*, Vol. I, page 309:—"In one part are the apparent remains of the walls of one of these huts standing to the height of eighteen inches or two feet; these walls are eighteen inches in thickness, constructed of stones, mostly small, piled one above another, inclosing a space not more than four feet six inches long by four feet wide." It is not clear why that accurate observer should thus, in this connexion, describe the remains of a building which, neither in size nor shape, would seem to correspond to any part of a hut-circle, as usually formed; and it is probable that the reference is to a relic of some other kind, now destroyed;—possibly the ruins of a small building similar to some that were discovered near the foot of the hill, and thought to have been pig-sties. (See Appendix to Chap. II, Huts.) Mr. Bloxam was written to on the subject. He replied that his visit was a very hurried one; that his notes bore no record of the *locus in quo*; and that the position of these remains had escaped his memory.

* Plate VII, figs. 1, 2 and 3. † Also Plate VII, figs. 5, 6 and 7. ‡ See Appendix to this chapter, Pits.

§ *Proc. Som. Arch. Soc.*, 1851, Vol. II, part ii, p. 74. ‖ *Handb. W.S.M.*, p. 80.

Digitized by Google

marked, may since have partially or wholly disappeared. To this it may be replied that experience does not encourage a belief that so wholesale and complete an obliteration can have overtaken remains alleged to have been distinctly visible in recent times. Such can have been subjected only to the action of the weather, or the occasional tread of human feet; but a large number have been protected even from these agents by their secluded situation, and the thick undergrowth which has screened them from intrusion.

67. Mr. Warre says that "some of these circles" [he generally means pits] were "to be found much to the east of the outer enclosure."* A very careful and repeated examination of the ground has led to the conclusion that, in making this assertion, he was mistaken; having, apparently, been misled by the many lead or calamine pits which are found in groups along the northern part of the ridge, and on the slopes below.

68. One other excavation in the inclosure remains to be noticed. Although hardly to be classed with the pits, it may most conveniently be discussed in connexion with them. It is the rectangular chamber,† portions of the walling of which are illustrated in one of the plates.‡ The chamber at St. Kew's Steps,§ though deeper, is of similar character: but perhaps its best analogues may be found in the larger chambers described as existing at Chastel-coz.‖ From the style of its stone-work, and from its size and regular shape, it may be assumed that it is of much more recent date than are the remains by which it is surrounded.

69. Mr. Warre refers to "a large circle of 50 feet in diameter, occupying nearly the centre of the place." ** This was examined by him, and "proved to be merely superficial, the solid rock being but a very few inches below the surface." Rutter describes a similar object, also "nearly in the centre," and "composed of separate stones, surrounded by a slight, shallow excavation or ditch."†† Mr. Jackson adds, that, having measured it, he found its diameter to be "full 27 feet. No separate stones were found. It consisted of an earthen bank, with a shallow ditch round it;" and he concludes that "it might have been used for worship."¶ No trace of any such circular bank or ditch has been visible since the author first visited the camp, more than thirty years ago. They are not likely to have disappeared within the period of observation; for the site of the supposed circle is very hard and rocky; and the surface seems not to have been disturbed, save in the middle, where Mr. Warre found fragments of pottery. It is believed that its position is indicated by a dotted circle drawn on Mr. Martin Atkins' plan at a spot 435 feet to the east of the western gateway, and 130 feet to the south of the line of cliff.‡‡ The three descriptions, quoted above, are, in several points, so mutually destructive, that it is hardly possible to come to any other conclusion than that this object has been nothing but a creation of the

---

Proc. Som. Arch. Soc., 1851, Vol. II, part ii, p. 77. † Plate III, 6; Plate VI, figs. 22 and 23. ‡ Plate VIII, figs. 1 and 2.
§ See Appendix to this chapter, Pits. ‖ *Ibid.* ** *Proc. Som. Arch. Soc.*, 1851, Vol. II, part ii, p. 81.
†† *Delin. of N.W. Som.*, p. 54. ¶ *Handb. W.S.M.*, p. 101. ‡‡ At 3 on Plate III.

Digitized by Google

fancy evolved out of two or three green depressions, marking shakes which, at the place in question, cross the top of the ridge. In the intervals between them, many exposures of rock protrude in orderly lines, with a very artificial aspect; making it easy to conjure up the idea that they indicate some human handiwork.

70. The account of the pits and ring embankments would naturally have closed here; but, before proceeding farther, it is necessary to take note of another of those numerous assertions of the learned antiquary, whose statements and opinions have herein been so often challenged. He thus writes*:—"Between the south wall and the ridge are wide scoops, almost like half-moons, embanked on their northern sides. There is nothing to shew whether these crescents were completely roofed or not; probably they were at least protected to some extent by erections of wicker-work or wattle along the tops of their northerly embankments, and from them it is quite supposable that a further shelter of skins or thatch might be extended to upright posts in front. All devices of this kind being placed above the surface of the ground would necessarily vanish in the lapse of centuries. The earthen banks alone are left behind, and of their general purpose and use no reasonable doubt can be entertained. Some of the inclosures thus made would be capable of receiving from thirty to forty persons." In a lecture, the same writer says†:—"The west side of the camp was the domestic part. The curious would see there enormous places scooped out in the ground, which were large dwelling places. These were perhaps for the weak—the women and children."[33] Now, though perfectly familiar with every part of the camp, the author was unable to find anything answering to these above-described "enormous places scooped out" and "embanked on their northern sides," which undoubtedly have been magnified, *more suo*, by their discoverer from those two gentle hollows, just within the southern rampart, 400 feet to the west of the rectangular chamber, and indicated by line-shading in the plan.‡ In reality, these are nothing more than some of those natural depressions which abound on the hill, and which (as may be seen on reference to the plan) are rather more numerous on the northern side of the inclosure than on the southern. There are no embankments attached to them; and the notion that they were excavated and intended for habitation is quite fanciful.

71 Estimates of the capacity of Worlebury to accommodate a force have differed very widely. Rutter supposed that from 40,000 to 50,000 might encamp within it;—which would give a square yard to each person! Mr. Warre reduced the number to 15,000 or 20,000;—still much too great. A general officer, experienced in savage warfare, informed the writer that from 7,000 to 10,000 barbarians might encamp in a fort the size of Worlebury; while it would not afford room for more than 3,000 or 4,000 infantry of a modern force.

---

33 "The domestic part" of such a camp would surely be the interiors of the huts. It is unlikely that any particular portion of the area was set apart for non-combatants; least of all that which was the weakest and most assailable—the very part, indeed, on which, Mr. Jackson himself thought, the grand assault was delivered.

* *Handb. W.S.M.*, p. 79. † *Lecture*, 1860. ‡ Plate II; also Plate III, 5.

Digitized by Google

WATER-SUPPLY.

72. When a stronghold was anciently to be established for the purpose of providing, in times of danger, a secure retreat for the tribe, or allied tribes, settled in its vicinity,—who maintained no select force of regulars to defend them, but were all warriors, when occasion called them into the field,—it would seem, to the modern mind, to be a matter of prime importance that an adequate supply of water should be ensured. But the barbarian, destitute of artificial means of finding and conducting this necessary of life—having, generally in such case, to be content with the drops collected during a shower, the scanty contribution of a runnel, active, perhaps, only in wet weather, or at best, the yield of a local spring[34]—thought otherwise. His first solicitude was to find a strong site for his fort. Such positions are apt to be waterless; or, if there are springs in the vicinity, they are usually at the foot of a hill, beyond, and far below any probable lines of intrenchment: hence, the possession of them is most precarious. It must have been so at Worlebury. The western part of the hill is absolutely dry; and the only known means of obtaining water during a siege[35] was from a spring which issued[36] from the sea-cliffs close to the beach, on the north-western side of the promontory, at the place marked "spring" in the Index-plan just abreast of the western gateway; from whence a very steep and rocky descent, through a break in the land-cliffs, gave direct access to the spot. As the spring could easily be cut off, it would be a matter of amazement that so much labour should have been expended on building such a citadel on a site so destitute of a sure and adequate supply of water, if this stood alone as an example of an apparently untenable position.[37] It was, however, not an uncommon predicament in olden times; and, that it was thought of secondary importance, can be explained only by the facts that our early predecessors were more inured to hardships than we are[38]; and that the habits of ancient warfare among uncivilized peoples were not such as to favour long sieges.

---

34 Doubtless, milk was generally available; but, as cattle need water to drink, the difficulty is not hereby lessened.

35 The settlement on the southern slopes of the hill, at some distance from the camp, eastward, was provided with water by springs on that side: but they were too far off to supply Worlebury in times of stress.

36 It was called "the dropping well." Mr. Jackson says that it was destroyed by a landslip in the year 1861.

37 For other examples illustrating this subject, see the Appendix to this chapter, Water-supply.

38 Boadicea, or Boudicca, (A.D. 61), in a speech to her troops, is reported to have reminded them that in many things the Romans were far inferior to themselves: among others, that "they can neither endure hunger nor thirst, nor cold nor heat, as we do. Moreover, they stand so much in need of shade and shelter, pounded corn, wine and oil, that if one of these things fail them, they perish: while to us every herb and root is food, every juice is oil, every stream is wine, and every tree an house." It was said also of the northern Britons that "they endure hunger, cold, and all manner of hardships with wonderful patience. They will remain without food for many days together, hidden up to the neck in bogs."—Dion Cassius, in *Xiphilin's Epitome.*

Digitized by Google

APPENDIX TO CHAPTER II.

A SHORT NOTICE OF FEATURES IN OTHER PRIMITIVE WORKS OF DEFENCE ILLUSTRATING, OR HAVING SOME ANALOGY TO THOSE OF WORLEBURY.

DISPOSITION OF WORKS.

1. The plan of Worlebury, and the account of the disposition of the works given in Chapter II, make it clear that they were arranged to include a protected area, in three chief divisions. The *enceinte*, bounded and defended on one side by the line of land-cliffs, and on the other by the ramparts with their parallel out-works, was divided by the cross-trench into two unequal portions; the larger being on the western side, and the smaller (the "keep") on the eastern. The northern slopes, below the land-cliffs, down to the sea, and the flat hill-top, to the east of the body of the work, together occupying an extended outer area, formed the third division, which, where most assailable, was partially protected by the outermost *valla*.

2. Now, the theory has been advanced, that this, or an equivalent arrangement, was characteristic of the defensive works of a particular people. The late Rev. F. Warre, who was specially interested in this branch of the archæology of Somerset, was of opinion that the camps in the district may be divided into two distinct classes, to be attributed to two different races. In one class he ranged all those planned, as he thought, in three parts, which he compared to the outer and inner baileys and the keep of a mediæval castle[1]; and in the other, those not thus sub-divided: and he claimed to have detected such a topographical distribution of these as indicated distinctions of ancient territorial occupation. The former class he regarded as "the characteristic type of the original British fortified towns in this part of England;" and, taking the line of the Parret and the Axe as that at which their constructors stood at bay, he enumerated their frontier defences from north to south as, the Castle-hill at Stowey, Rowborough, Norton Fitzwarren, Castle Neroche, Hamdon, Musbury and Membury. But outside of the Dumnonian region, he instanced others as of the same type:—Worlebury, Dolbury, Combe-down and Orchard-castle;—the existence of which he explained by attributing them to the same people before they were

[1] Mr. Warre's exposition is as follows:—"The first point on the plan to which I wish to draw attention is:—that the area enclosed within the outer rampart, [he was speaking of Neroche], is divided into three separate portions; of which that immediately within the rampart is much the largest; that within the second line of defence smaller; and the third, which is much more strongly fortified than either of these, the smallest. The beacon, owing to the natural formation of the hill, being in this case outside the main entrenchment, is defended by an entirely independent system of fortifications. This is a very common arrangement in British stations of importance. I imagine the outer inclosure to have been intended for cattle; the second, which is more strongly fortified, to have been occupied by the neighbouring population, who took refuge in the stronghold in times of danger; and the smallest and strongest, to have been the citadel." —*Proc. Som. Arch. Soc.*, 1855, Vol. V, part ii, pp. 44, 45.

Digitized by Google

confined within narrower limits. In short, Mr. Warre gave all such works to the Loegri [Lloegrwys], who, in the Welsh Triads, are said to have dwelt in these regions in very early times; and to have made a treaty with some emigrants from the Continent, called the *Men of Galedin* (supposed to have been the people otherwise called the *Belgæ*), who, after breaking faith with the natives, went to war with them, and, in course of time, deprived them of large portions of their original territory—of all, indeed, to the east of the line of the two rivers, within which their domain was supposed to have been at last limited. To this foreign people Mr. Warre attributed the undivided, or concentric camps, of which Cadbury, near Wincanton, is one of the best examples.*

3. A careful examination of most of the adduced instances—which, to test the theory, should be compared with many other ancient fortifications in the West of England—has led to the conclusion that Mr. Warre's induction was based upon much too small a number of examples; and these, in several instances, either wrongly classified, or not sufficiently marked to lend it any support. His three-fold arrangement is found in its proper order of succession (but perhaps this order is a matter of secondary importance) in one or two only of the camps he has named—the best example being Castle Neroche;—with which, perhaps, might have been classed the small fort called Orchard-castle, if it had possessed three instead of only two divisions, and if it had not been since shown to be Norman. Hamdon has it not; and Membury and Norton must certainly be put into the other category. In Worlebury, the two subordinate divisions are separated by the "keep", which, however, has no relief above the general surface; and Dolbury does not answer to the definition, for it has neither a cinctured keep, nor any external inclosure. It cannot have occurred to Mr. Warre that there are many fine examples of the concentric camp in Dumnonia—even down to the extremity of Cornwall; and also that specimens corresponding with, or closely affiliated to the other kind, are found in many other localities, *e.g.*, in Wales, Ireland, Brittany and Istria. Omitting the less important works of the concentric class in the West, it will suffice to instance Chywoon-castle, Castle-an-dinas, and Castle-Kenyoe, in Cornwall; Ditchin-hills, Denbury, Hembury, Cadbury (near Silverton) and Membury, in Devon; and Norton, in Somerset;—all within the region unpenetrated by the Belgæ; and all good examples of the circular, oval, or concentric form.

RAMPARTS.

4. The only other primitive camps, of note, in the West of England, with stone-built ramparts,[2] are Dolbury, in Somerset, and Chywoon-castle, in West Cornwall. On Dartmoor, and on the Cornish hills, there are, indeed, many inclosures of a sub-military

[2] Slight remains of stone-facing (built, probably, to hold up the lower portions of the banks) have recently been found at Cadbury (Wincanton), which has been classed among earthworks. Mr. Warre (rather doubtfully) thought that he could detect such facing in its banks. It is possible that many similar cases might be found, if sought for.

* *Proc. Som. Arch. Soc.*, 1855, Vol. V, part ii, pp. 44, 45; *Ibid.*, 1857, Vol. VII, part ii, p. 54; *Ibid.*, 1858, Vol. VIII, part ii, pp. 65, 66, and 72—75; *Ibid.*, 1860, Vol. X, part i, p. 13; *Ibid.*, 1863-4, Vol. XII, part i, p. 56.

Digitized by Google

character, which were entirely protected by stone ramparts,—now, for the most part, in a state of ruin. These walls were solidly built with massive granite blocks and slabs, gathered from the surrounding moors. There is no evidence that any of them were terraced, either inwardly or outwardly; and in this respect, as well as in the superior size and bedding of the stones, they compare much more closely with some of the Welsh camps, hereunder referred-to, than with the works at Worlebury.

5. Chywoon-castle is an elliptical fort, somewhat kindred to the Irish "dúns." It is formed by two concentric walls, built homogeneously, with nearly vertical faces, some portions of which (especially near the gateway) are still visible. The inner and principal wall was from 8 to 10 feet in thickness; the outer one, about 5 feet. Nothing can now be seen indicating that these walls were once parapeted. The inner one is now 5 or 6 feet high; but in Dr. Borlase's time it was, he says, a few feet higher.*

6. In some respects, Dolbury presents a better, though not a complete analogue. The principal, or inner *agger*, on the northern side, and along the whole—or, at least, the greater part—of the eastern and western ends, was faced with dry walling, similar to that at Worlebury,† ranging along the scarp of the inner ditch, and backed by a bank composed of earth and stones. It is now impossible to determine, with any degree of accuracy, to what height this facing was carried; nor can we do more than conjecture whether it was crowned by a parapet, or whether it was terraced with a second stage resting on the core of the bank.‡

7. Unless Dolbury, when perfect, presented an example of terraced structure, we must look farther a-field for illustrative analogues. There are kindred features among the stone-built fortresses of Wales; but these have not yet been examined with sufficient care. If this were done, it is quite possible that discoveries might be made of original work, now covered by *débris*, which might show that the structure of some of these camps resembled that of Worlebury much more completely than, at present, it seems to do. For one thing, it has not yet been noticed whether any of these walls are compound. There seem, however, here and there, to be distinct superficial evidences of terracing, as in some of the examples now to be adduced.

8. The best-preserved specimen of this occurs at Tre-ceiri,[3] on Yr Eifl (commonly called "The Rivals"), a fine triple-peaked mountain in Caernarvonshire. Perhaps from lack of exploration, no bench, or terrace, has been observed on the outer side of the wall, which, however, in its least-injured portions, seems to preserve its face unbroken from footings to crest; but a "Chemin de Ronde, which extends some distance along the wall

3 This is the form of the name, as locally pronounced. Prof. Rhys regards it as signifying the *town of giants*. The literary form s Tre'r-ceiri. as Mr. Barnwell has it —*Arch. Camb.*, 1877, p. 339.

* *Antiquities of Cornwall*, 1769, p. 347. † For a drawing of a short length of this, refer to Plate VIII, fig. 6.

‡ *Journ. Brit. Arch. Assoc.*, 1882, Vol. XXXVIII, art. on Dolbury and Cadbury, by C. W. Dymond, F.S.A., pp. 403, 4; also *Proc. Som. Arch. Soc.*, 1884, Vol. XXX, part ii, art. on Dolbury and Cadbury Camps, by the same author, p. 108.

Digitized by Google

on the west side, forms one of the most remarkable features of this work." It flanks a sally-port, and "changes in its proximity from a single to a double walk.[4] It seems that this arrangement of a lower walk was connected with the defence of the postern. This double walk does not extend far, but becomes a broad one, with the parapet of such a height as to protect the greater part of a person on it, yet so as to enable him to look over it. At present, parts of the work are about fifteen feet high; but the ground outside has been raised so much by fallen stone, that no measurement from the level has, we believe, been taken. The breadth of the wall, including both parapet and walk, is sixteen feet; but the parapet, in fact, is simply the wall continued above the level of the walk, and is of such a thickness as to admit several defenders to stand on the top of it, for it was only from such position that they could act, owing to its breadth."* The character of the stone-walling of Tre-ceiri (the material is a hard schist) is described as being intermediate between some kindred examples in the Principality which are inferior, and others which are superior to it. The illustrations in Mr. Barnwell's paper indicate that it was generally better than the best work at Worlebury. Dr. Christison, who visited Tre-ceiri in 1887,† "estimated the total height of wall and parapet," where the structure "appears to be pretty perfect, to vary between 10 and 14 feet and the width to be 10 feet." But the width varies. "Mr. Prichard‡ reduces it to 9 feet, and Mr. Barnwell made it as much as 16 feet for a short distance near a sally-port." "The parapet . . is about 3 to 4 feet high, and according to Mr. Prichard is 5 feet wide."

9. Pentyrch, a small annular camp, also in Caernarvonshire, 3½ miles E.S.E. from Tre-ceiri, affords the only other recorded example of a distinctly defined *chemin-de-ronde* in a Cambrian fort. "The main or inner rampart, in form nearly circular, is composed entirely of stone, and," on the north side, "where least injured, shows a thickness, at bottom, of about 18 feet. Here the parapet [*chemin-de-ronde*] which doubtless was originally carried all round, is most perfect, being 6 feet broad and paved with stones laid flatways; some few also of the facing stones of the inner side of the battlement remain here 'in situ.'"§

10. Pen-y-gaer, Caernarvonshire, 3½ miles E. by N. from Tre-ceiri, and 2½ miles N. from Pentyrch, is described by a Welsh antiquary as "the remains of a small fortified

---

4 Dr. Christison says that "Mr. Prichard who took down a part of the lower step of the banquette believed it was put in as a support to the wall, which was giving way."

* *Arch. Camb.*, 1871, fourth series, Vol. II, art. on Tre'r Ceiri, by Rev. E. L. Barnwell, pp. 76, 77. See also cuts, Nos. 2 and 6. *Cf.* ramp at Worlebury, Plate V, fig. 1.

† *Proceedings of the Society of Antiquaries of Scotland*, Vol. XXVIII, art. on The Prehistoric Fortresses of Treceiri, Carnarvon, and Eildon, Roxburgh, by Dr. D. Christison, pp. 100—111.

‡ *Arch. Camb.*, 1867, p. 259.

§ *Ibid.*, 1873, fourth series, Vol. IV, art. on Pentyrch, by Rev. W. Wynn Williams, p. 155. See also view of rampart on opposite plate, showing a style of face-work and paving altogether differing from that at Worlebury.

Digitized by Google

town, defended on its western and weaker side by a double wall with a terrace on the outside, precisely of the same character, but not so imposing in height and construction, as the specimen I had seen at Worlebury. The top of the wall which forms the outer step or terrace of the rampart, is several feet lower than the top of the inner line of stonework." But, he doubtfully adds, "whether the terrace was designedly made as it now appears, to be occupied by the first line of defenders, whilst the higher and more commanding interior wall was manned by a second row of combatants, or whether its present appearance is the result of dilapidation, I cannot say." And, farther:—"I find by my notes taken at Pen y Gaer and Worlebury, that the thickness of their walls is precisely the same; the inner fold of masonry at both places measuring 8 ft. across, and the outer one 5 ft. across, their united breadth being 13 ft. We are indebted to the small size of its stones for the little that remains of the Pen y Gaer rampart. . . . At Tre'r Ceiri the main thickness of the wall is on the outer side of the rampart, the narrower and lower terrace being within, which is a reversal of the arrangement at Pen y Gaer."* As the writer of the paper from which these extracts are taken expresses some doubt whether the supposed outer terrace was a part of the original work at Pen-y-gaer, it cannot, at present, be safely accepted as an analogue of the outer terraces at Worlebury—the thickness of the walls of which he much under-estimated.

11. Until the true forms of the walls (at present supposed to be simple) of several other Welsh camps of kindred character shall have been definitely ascertained, it is not possible to do much more than cite their apparent dimensions.

12. At the great stronghold, Braich-y-ddinas, sometimes called Dinas-penmaen, on Penmaenmawr, Caernarvonshire, "the thickness of the outer wall is from 8 to 9 feet; and its height, where most perfect, is 9 feet. The face of this wall is singularly uneven, and its course winding and irregular, just as if parties of men building simultaneously on the edge of the declivity, and following its outline, united their random work as best they could. Its masonry is dry but strong, the stones being set across the structure, their ends alone forming its outer face. The main rampart at Tre'r Ceiri is similarly built with heavier materials."†

13. In the same paper occurs the following note on the camp, Gaer-drewyn, near Corwen. "This camp has much of the Firbolgic character, and was protected on its north-western side by a wall 18 ft. thick, as appears by its foundation, where its faces on each side have been exposed."‡

14 At Carn-goch, in Caermarthenshire, another great stronghold, "the ramparts are in a state of utter ruin; though most probably, judging from the analogy of other camps in Wales, England, Scotland, and especially Ireland, they must once have been erect walls

* *Ibid.*, 1877, fourth series, Vol. VIII, art. on Braich y Ddinas, by Rev. Hugh Prichard, pp. 230, 231. † *Ibid.*, p. 221.

‡ *Ibid.*, p. 228.

Digitized by Google

of great thickness."* "The thickness of the heap of debris caused by the falling of the walls is not less than 60 feet, and the height of the heap from the outside, as it now remains, is about 20 feet."†

15. The only other Welsh camp (known by description to the author) presenting features of masonry like those of Worlebury, is the doubly-intrenched fort on Craig-y-ddinas, in Caernarvonshire, 6½ miles N.E. from Tre-ceiri. There, the inner of two parallel lines of defence is "a rampart of loose stones which may be the ruins of a wall." About half the circuit of the camp is formed by a steep natural declivity, the brow of which is described as strengthened by "a second rampart of rubble walling."‡ An illustration of a portion of this wall is attached to the paper; and from this, it would appear to be much like the walling at Worlebury, though, perhaps, built with better material.

16. Among the best examples of ancient compound fortress-walls are those presented by some of the forts in the South Isles of Aran, Co. Galway, Ireland, examined by Prof. C. C. Babington, and by him attributed, with assurance, to the Firbolgs, at a date long anterior to the commencement of the Christian era. The material with which they are built is thus described by that author:—"As these islands consist of stone in such a state as to be easily separable into blocks of a rectangular form, the masonry of the forts has singular regularity, the walls are nearly perpendicular, and the joints tolerably close. Indeed, when observing them from a distance, it is difficult to believe that they are uncemented, and so ancient."§ "They are works of a race unacquainted with the use of metallic tools."‖ Of these forts, that called Dubh-chathair is considered to be by far the oldest. "Its wall is of enormous thickness, and still about 20 feet high in many parts."** The wall of Dún Onacht "is formed of square but unhewn masses of limestone, put together without cement. It in fact consists of three distinct walls built touching each other, so that the destruction of the outer face would merely cause another perfect surface of wall to present itself. This compound mass of compact stone work is 15 feet in thickness, and fully 16 in height. There are traces within of four sets of steps leading to the top. Dr. O'Donovan considers this fort to be about 2000 years old, but, nevertheless, much more modern than Dubh Chathair."†† Dún Aonghusa, the grandest of these forts, "stands on the top of an overhanging precipice of 302 feet in height. The inner wall is built in a horse-shoe form, and terminates at the edge of the cliff at each end. It is compounded of three in the manner already described; the inner and outer portions having been added to give additional strength to the defences, or in consequence of the decay of the original wall. Taken together, this compound wall is 13 feet thick, and about 18 in

* *Ibid.*, 1860, third series, Vol. VI, art. on Carn Goch, by M. M. and H. L. J., p. 99. † *Ibid.*, p. 100.

‡ *Ibid.*, 1878, fourth series, Vol. IX, art. on Craig y Dinas, by Rev. E. L. Barnwell, pp. 219, 220.

§ *Ibid.*, 1858, third series, Vol. IV, art. on Firbolgic Forts in the South Isles of Aran, Ireland, by C. C. Babington, p. 98.

‖ *Ibid.*, p. 97. ** *Ibid.*, p. 99. †† *Ibid.*, pp. 99, 100.

Digitized by Google

height. Originally there were two entrances, of about 3 feet 4 inches in width at the top, but rather broader below, roofed with large flag stones. One of these doors has been closed by the erection of the inner wall, and thus we learn with certainty that that wall is less ancient than the others."* The outer defences are simple walls of less strength. All the above forts are on Inish-more, the largest of the three islands. Near the centre of the middle island, Inish-maan, is situated the great fort, Dún Chonchobhair. "Its wall is from 17 to 20 feet in height; there are two internal flights of steps, and it contains the remains of many cloghauns. There is also a strong outer wall, and a square inclosure, like an advanced work, at the entrance."† Nothing is said as to whether the walls are simple or compound.

17. Very like the Aran forts are those occupying Dingle promontory, Ireland. They, too, are built with stones of much larger size, and far better bedded, than the rubble of Worlebury. In that district, they are of grit or sandstone: hence, a solidity, regularity, and complexity of structure altogether unattainable with very inferior material; and, were it not for the peculiarity of a compound wall, observed in one instance, there would seem to be little in common between these Irish camps and our Somerset example. In that fort —Dúnbeag—the main wall, across the neck of the promontory, seems to be generally about 14 feet in thickness. It contains a long, narrow, vaulted passage, which made it necessary to give great thickness to the wall. On each side of the gateway, in order to admit of the construction of chambers in the mass of masonry, this thickness is increased to 20 feet, while a corresponding length of the outside of the wall is faced with "an additional layer of masonry about 4 feet in depth [thickness] and 30 feet in length, which bears, however, the appearance of an after-thought, as the face of the original wall is clearly distinguishable behind the outer work."‡ The section of the wall, given in the plate, represents the height of the aforesaid buttress, or re-inforcement, as equal to that of the broken top of the main wall; but the author of the paper seems to think that the height of the latter must originally have been greater than it is now; for, he says,—"The interior face of the wall at Dunbeg recedes by a succession of steps, which doubtless led to a parapet on the top."§

18. Crossing the Channel into Brittany, we find a camp, Chastel-coz, which has been brought prominently into notice by comparison with Worlebury, chiefly on account of its pits, a description of which will be found in par. 40. But its walls also are reported to have some features to which it may be well to draw attention. The precipitous edge of the platform is defended by "a parapet with its *chemin-de-ronde*, constructed of earth and stones,

* *Ibid.*, pp. 100, 101. † *Ibid.*, p. 101.

‡ *Arch. Journ.*, 1858, Vol. XV, art. on Ancient Forts and Habitations, Dingle Promontory, Co. Kerry, Ireland, by G. V. du Noyer, pp. 3, 4.

§ *Ibid*, p. 4.

Digitized by Google

some of them being of considerable size."* This rampart is continued for a considerable distance outside the principal defences, along the top of the cliff at one edge of the neck of the peninsula which is occupied by the camp. The principal wall crossing the neck, and forming the immediate defence of the inclosure against attack from the land-side, is described as about 6 feet in thickness, and as being built with dry, but regular masonry, with its top 20 feet above the bottom of the ditch. Two other parallel lines, or banks of earth and stones, complete the transverse defences of the place. We are not informed whether their ditches are filled with loose stones, the ruins of outer breastworks, as at Worlebury. There are two outermost unintrenched banks across the neck of the promontory, one of which is of stones and earth, and "the other is formed almost entirely of blocks of granite;"†—in all likelihood, the ruins of a once rude but regular wall.

ENTRANCES.

19. The only camps among those noticed above, possessing remains of uncovered gateways, sufficiently preserved and explored to furnish analogues to those of Worlebury, are to be found in Cornwall, Devon and Wales.

20. Chywoon-castle has but one entrance, about 6 feet in width, through the inclosing wall, the flanks of which are faced with bold random stone-work.‡

21. Though there are three entrances to Grimspound, recent investigations have led to the conclusion that, originally, there was but one,—that in the south-east quarter,—which has now been cleared of the ruins which formerly encumbered it. Its width is 7 feet, and its length 14 feet. The inclined floor is paved with broad slabs laid in a series of very easy steps. There are no indications leading to the inference that it was furnished with a swing-gate.[6]

22. At Tre-ceiri, two of the entrances, as described, appear to be, in character, almost identical with those of Worlebury. The principal one, at the south-western end of the camp, was protected by a series of advanced works, the nature and plan of which have not yet been ascertained. Of the second gateway (that in the north-western wall), we have a description, plan and view. Its width, at the inner and narrowest part, is 8 feet; the opening widening outward to 20 feet. "There are no indications of interior fittings of gates or doors to the jambs;" but, near the inner end of one of the short flanking walls, "is a small recess, 2 ft. 8 ins. long, the object of which is not certain."§ In the northern division of the rampart is a third gateway, which has been regarded as a sally-port. Its

§ The information given in unreferenced paragraphs has been derived from personal observation by the author, who is also able to corroborate some of the general statements made, with respect to other examples, by the quoted authorities.

* *Arch. Camb.*, 1870, fourth series, Vol. I, art. on Ar Chastel Coz, by R. F. Le Men, p. 288; also *Arch. Journ.*, 1872, Vol. XXIX, p. 316.

† *Ibid.*, pp. 287 and 315 respectively. ‡ *The Lands End District*, 1862, by R. Edmonds, p. 36.

§ *Arch. Camb.*, 1871, fourth series, Vol. II, art. on Tre'r Ceiri, by Rev. E. L. Barnwell, pp. 77, 78, and cuts 3 and 4.

Digitized by Google

width is about 6 feet; its height is supposed to be about 5 feet; and it has a massive lintel, forming "the only known example of such an entrance throughout the Principality."* It is almost needless to add that, with such material as alone was available, the construction of such a covered entrance at Worlebury would have been an impossibility.

23. "The principal entrance of Braich y Ddinas is in a state of thorough dilapidation, and shows not much of its original dimensions, but retains on the left, as you enter, a few yards of stone facing. . . . The ruined wall on the right presents a degree of return, and, at its extremity has a circular pile of stones indicating the position of a hut, one or more of which are found near to the entrances of most of these stations. They served the purpose of warders' cells or guard houses."† At Gaer-drewyn, near Corwen, are "distinct indications of lodges at both of its entrances."‡ The same are visible in the plan of Castell-caer-lleion, near Conway.§

24. The entrances at Carn-goch are thought to have been numerous; but it has never been clearly ascertained how many of those supposed to be ancient may really be modern. "The small narrow passages which were found in the walls of Carn Goch, on the visit of the Cambrian Association in 1855, . . were then thought to have been better adapted for the passage of sheep than men."‖ Two of the main entrances appear to have pierced the thick western *agger* of the larger of the two camps, near its extremities. Flanking returns extend a short way down the slopes. "The easternmost rampart is of about the same extent as that towards the west. In it two passages, or sally-ports, leading right through, with the side walls partly preserved, are to be found."** Among the many other supposed minor entrances, there are, in the middle of the southern wall, "two passages with upright stones still remaining in them."††

25. When the writer visited that camp, he found traces of only one of the two narrow passages alleged to have been seen at the eastern end. Two of the side slabs were *in situ*. A similar passage through the southern wall was much better preserved. Here, the slabs, from 3 to 5 feet high, were in position for a length of about 15 feet on one or both sides, forming a straight passage, 3 feet in width, falling with the dip of the ground, through the base of the *agger*. From its length, it is probable that it, and all the others, passed quite through the original wall; but it would be impossible, without much labour, to verify this by actually exposing to view the outer face of the rampart. There is nothing to show whether these passages had been roofed or not. It seems likely, however, that at least the inner portions of them were so; for the wall must have stood several feet above the tops of the slabs. There were no such passages at Worlebury.

---

* *Ibid.*, pp. 75, 76, and cuts 1 and 2.

† *Ibid.*, 1877, fourth series, Vol. VIII, art. on Braich y Ddinas, by Rev. Hugh Prichard, p. 227. ‡ *Ibid.*

§ *Ibid.*, 1846, first series, Vol. I, p. 72, and plan. ‖ *Ibid.*, 1871, fourth series, Vol. II, art. on Tre'r Ceiri, pp. 74, 75.

** *Ibid.*, 1860, third series, Vol. VI, art. on Carn Goch, p. 100. †† *Ibid.*, p. 101.

Digitized by Google

26. At Dinas-dinorwig, 4 miles E.N.E. from Caernarvon, "the passage through the stone bank forms a regular gateway bounded by large upright stones, of which several remain upon each side."*

27. Near the centre of the length of the main wall of Chastel-coz "is the entrance, 5 feet wide, the sides of which are flanked by two large blocks of stone."† Two recesses "of triangular form and very small dimensions, have been built inside the wall, one on each side of the entrance-gate."‡

28. The best analogue of the peculiar feature of the western entrance is afforded by the steps of St. Kew, before referred-to, which also are of selected, undressed, flat stones. They were laid to facilitate the passage of a steep ravine, and (omitting a portion, now covered with soil and grassed over, near the foot of the hill) are in two flights, the lower one consisting of 132, and the upper of 34 steps. Between these there is a landing, and the chamber described, *infra*, 42.

29. Two similar, but bolder flights of steps exist in Merioneth—one in Bwlch-tyddiad, above Cwm-bychan, the other in Bwlch-drws-Ardudwy—both in the mountains behind Harlech. "These stairs are built of large slabs resting on rude courses of rough masonry, and having slightly raised curbs, especially on the outside,"§ [the edge toward the declivity]. In a letter to the writer, Mr. Barnwell said that the stairs are much larger than those of St. Kew, and were meant for horse-traffic.

CUP-PITTINGS IN RAMPARTS.

30. The hitherto vexed question, whether these hollows are accidental or artificial, and, if the latter, what was their intent, can hardly be regarded as finally settled until a thorough examination shall have been made of all those which are said to exist in several of the camps herein referred-to. There does not appear to have been the least pretence of doing this,—save, possibly, in the case of one such hollow in the *agger* of Gaer-drewyn, which has been slightly examined. This information has been derived from the Rev. Hugh Prichard, who, in letters on the subject to the writer, says:—There are "several cavities, wells, or hollows, indicated by funnel-shaped depressions, at stated distances in its ramparts; but, excepting in one case, no attempt seems to have been made to ascertain whether any chambers lie beneath. A small part of the inner facing of one was exposed, which conveyed the idea of a descending pit or shaft, of remarkably small diameter, which could scarcely have been intended for habitation." Much experience in working among masses of *débris* has taught the writer to be very cautious in accepting the conclusions

* *Ibid.*, 1861, third series, Vol. VII, art. on Ancient Fortifications near Llanberis, p. 238.

† *Ibid.*, 1870, fourth series, Vol. I, art. on Ar Chastel Coz, p. 288; also *Arch. Journ.*, 1872, Vol. XXIX, p. 315.

‡ *Ibid.*, pp. 289 and 316 respectively.

§ *Arch. Camb.*, 1873, fourth series, Vol. IV, art. on Primæval Merioneth, by Rev. E. L. Barnwell, p. 86.

Digitized by Google

sometimes drawn from casual and partial investigations, such as this one seems to have been. Again and again has he found collections of stones, jammed together as though by design, which proved to be nothing more than accidental groupings. It is well, therefore, to suspend the judgment in cases of which the record is so indefinite. In such a situation, it is almost certain that a shaft would have been so built and preserved, that no room for doubt would have been left in the mind of an explorer, accustomed to judge of structure, who should be able to trace it down and measure its diameter. The "remarkably small diameter" of the supposed "shaft" is, of itself, sufficient to beget a doubt. We have seen how little foundation there was for similar, but stronger assertions with reference to the alleged wells in the Worlebury walls.

31. A multitude of these pittings have been seen on the ruined ramparts of the two camps at Carn-goch. In the published plan of these camps, 92, of all sizes, can be counted. They are represented as frequently occurring singly, at long intervals; but also, often in groups of two, three, four, or six. Flanking returns of the wall on either side of the western entrances to the large camp are said to extend "a short way down the slopes, and are defended by circular pits, equivalent to the rifle-pits of modern days."* "On each side of the principal [eastern] entrance, large circular chambers, with smaller circular holes, still exist."† Northward from the south-western entrance "occur several circular holes, and others are found near the northern end of the rampart."‡ "Entrances and circular holes occur all along" the northern rampart; "and, in some instances, passages leading from the interior of the camp to what must have been circular chambers, perhaps covered over, can still be traced."§ Entrances and circular holes occur along the unfinished out-work on the northern side of the hill.‖ "Numerous circular holes also occur at various points along the southern rampart, . . and in the enormous carnedd of stones lying on the natural rock—the highest ridge of the hill,"¶ within the area of the larger camp. "But," the writers add, "the summit has lost its original form, partly through the operations of the Ordnance surveyors, and partly through the Rebecca rioters, who, in 1843, erected beacons here for raising the country."** The difficulty of freely accepting the antiquity of the cups is, in this case, as in all others, much increased by the dilapidation of the works, and, in many parts, by their evidently rudimentary state. Of those at Carn-goch we read that "the walls are of very unequal strength, and indeed seem in several places never to have been finished:"†† . . but "the whole line of wall has served to construct houses and walls all over the adjacent district."‡‡

32. In Chapter II, par. 29, reference has been made to a special visit paid to Carn-goch in 1884, with the object of making a personal inspection of these alleged cups. Several

* *Ibid.*, 1860, third series, Vol. VI, art. on Carn Goch, p. 100. † *Ibid.* ‡ *Ibid.* § *Ibid.* ‖ *Ibid.* ¶ *Ibid.*, p. 101.
** *Ibid.* †† *Ibid.*, p. 104. ‡‡ *Ibid.*, p. 99.

Digitized by Google

hours were spent in examining the main rampart of the large camp, and all its southern outworks. The published plan was found to be inaccurate; and useful only as a general guide to the main parts of the work. The positions of very few of the holes shown therein could be identified; and many exist at points where none are marked in the plan. The term "circular holes", by which these depressions are described in the passages quoted above, is quite misleading:—as, indeed, if unqualified by description, would be the word "cups", which (to repeat) is here used merely as a short and convenient name. With not one exception, like those at Worlebury, they are nothing but ragged pittings in the surface of the stone-*débris*;—the majority, in their present state, plainly not ancient; and several of them new, showing fresh exposures. They would not have been deemed worthy of notice,—indeed, would scarcely have attracted it,—had not so much been made of them by other observers. They are scattered irregularly over the crest and flanks of the *agger*, even down to the toe of the *débris*, where several of them may be found, just north of the south-western gateway. In such a position, they speak for themselves; and strongly support the conclusion that all alike are accidental. Precisely similar holes may be seen along the tongue, shown in the plan as the southernmost outwork, which, in greater part, is nothing more than a steep *talus* of a low range of rocks. The large hole shown in the plan, south of the passage in the eastern rampart, through which the streamlet issues, is not to be found; but a similar one—not shown in the plan, and therefore, probably, of later date—exists at a point about 20 feet south of the north-eastern angle. Ragged inside, it is faced, on the convexity toward the inclosure, with an artificial footing, looking quite recent, and like the work of a shepherd's idle hours. This, with the revêtement of the ordnance-carn, and the slabs of the narrow "sally-ports", were the only bits of facing visible in the camp. Of all the cups that were examined, none appeared to occupy any designated position, except those which flank the main entrances. Each of the other entrances seems to be flanked by one such cup. The evidence that these may be the last relics of some hollow structure is far inferior to that furnished by the large and distinctly-traced "hut-circles" which are sometimes found attached to the ramparts and entrances of smaller semi-military inclosures in Wales, Cornwall, Devon, and other districts. As to the "circular chambers, perhaps covered over", supposed to have been entered by the narrow passages in the walls, —they are purely hypothetical, and, to the last degree, improbable.

33. The chambers observed in the body of the ruined wall of Pentyrch seem to differ greatly from these supposed "wells", or "circular chambers". One of them is "apparently rectangular, measuring 6 feet by 4 feet and well faced on three sides: the others much jumbled up, but probably circular."* The view of the rectangular chamber in the plate accompanying the description, indicates that it was regularly built with vertical faces of coursed-work.

* *Ibid.*, 1873, fourth series, Vol. IV, art. on Pentyrch, p. 155.

Digitized by Google

DITCHES.

34. In attempting to fix the relative ages of camps, some antiquaries have adopted one canon of judgment, others another. For example, it has been said that unintrenched camps are earlier than those in the same country which are intrenched:—an opinion which has not been supported by valid evidence. It has also been held (as we have seen)* that the character of the walling is an index to its age:—a *dictum* which must be taken with very wide discretion. In the same district will be found camps, similarly built,—and, according to this canon, presumably of the same age,—in some instances ditched, in others not. May not a reason for these differences be found in local conditions, viewed with reference to sufficiency of resources and economy of labour? If a camp is to be established on a rocky position, strewn with an abundance of blocks of stone, bold enough to admit of the erection of massive, well-bonded and durable walls; these would generally be so unassailable that, to front them with ditches, would be but to waste labour. On such sites, accordingly, we usually find the ditches omitted, as, *e.g.*, at Braich-y-ddinas, Tre-ceiri, Carn-goch, etc., in Wales; the Aran forts, in Ireland; Grimspound, in Devon; and many others in similar situations:—most of them with a single line of circumvallation. Often, where detached stones were not abundant, the ground may have been loose enough to allow of the easy extraction of surface-stone,—especially in stratified formations; in which cases, a ditch, while increasing the difficulties of an assault, became also a convenient quarry for the material needed to build the walls. Doubtless, it was chiefly for these reasons that ditches were drawn around, or in front of, Chywoon-castle, Dolbury, Worlebury, Pentyrch, Craig-y-ddinas, Dinas-dinorwig, Dúnbeag, and Chastel-coz:—all of which are wholly or partially protected by more than one line of defence. In the cases of Dolbury, Worlebury, and, possibly, one or two of the above-named Welsh camps, ditches became the more necessary, as the walling was not bold enough to be quite sufficient for defence without these reinforcements.

"SLINGERS' PLATFORMS."

35. It has been stated by Mr. Jackson that some of these singular objects exist on St. Thomas' Head. In this he was not quite correct: the sheets of stone which are there to be seen are larger; and should be classed with the *talus*, under which head they will again be referred to.† Mr. Warre, in his description of Castle Neroche, Somerset,‡ says that "two sides of the narrow slope of the beacon are too steep to require any regular entrenchments, though they were perhaps strengthened by platforms for slingers, some of which, I think, I have succeeded in tracing." Mr. Warre here uses such doubtful language in describing the local circumstances, that he throws no light on the vexed question of the

* *Supra*, Chap. II, par. 23. † *Infra*, par. 36. ‡ *Proc. Som. Arch. Soc.*, 1855, Vol. V, part ii, p. 41, art. on Castle Neroche.

Digitized by Google

"slingers' platforms" at Worlebury. The reader must be careful not to confound these triangular objects with those very different features which (calling them by the same name) Mr. Warre probably saw at Neroche; and which he farther refers to in the following words:—"There is one very peculiar and characteristic feature of British fortification which I have hardly ever found wanting in the military works of that people. This is a series of low terraces, scarped out of the side of the hill, rising one above another, not continued in an unbroken line round the place, but forming, in some cases, almost a network of platforms, commanding every approach to the entrances, and affording advantageous positions for the sling."* To call these "platforms", is, perhaps, to cause some misconception as to their character. While the low rock escarpments are vertical, or nearly so, and the cutting forms a bench immediately below, the remaining breadth of the intervals between the escarpments is merely the untouched, and, generally steep, natural slope of the hill-side. Whether, then, slingers were, or were not, posted along the level portions of these escarpments (and it is likely enough that they were), it is clear that considerable physical obstacles in the way of an assault were thus created. Such escarpments, which are very prominent in the defences of Hamdon and Cadbury (Wincanton), in Somerset, and of Scratchbury and Battlesbury, in Wilts, are, however, not found at Worlebury:—unless, perchance, they may be represented by the slight benching at the back of portions of the principal ditch.†

TALUS.

36. The nearest analogue of the *talus* at Worlebury is found in several rough sheets of stones on the sides of St. Thomas' Head. Two of these are on the southern slope, in the bottom of a shallow hollow, south-west of the beacon, running down to a rocky cove. They are rudely triangular, with ragged sides; and rest lengthwise on the slope. In neither case are there any impending rocks from which the *débris* could have been derived; and in both cases (unless they are altogether a result of denudation) it must be concluded that the stones were so spread for some not very evident purpose. The same conditions hold in the case of the group on the northern side of the hill. These, as to superficial appearance, (they have not been excavated), merely repeat, on a smaller scale, the *talus* of the Worlebury cliffs. Like it, they have angular or rounded upper edges, partially formed with narrow belts of spalls. In one or two instances they are crossed by very slight benches, not much easier of passage than the rest of the rather intractable surface; but as these are in line with corresponding grassy paths at either end, they may have been trodden by sheep. In any case, they are too narrow, and too near together, to admit of the supposition that they were made for slingers. But there is something in the position of this line of works which suggests a possible association with such light-armed troops; for

* *Ibid.*, p. 34. † Chapter II, par. 46.

Digitized by Google

they flank, and completely command, a long, but not wide, level area, at the head of a good landing-place, adapted for the concentration of an invading force.

37. Not to go farther a-field for cases where an approach to the walls of castles and camps is impeded by sheets of stones, it will suffice to cite Mr. Barnwell's account of those which almost surround Tre-ceiri.* "To ascend the mountain most easily, it is necessary to follow the high road from the village of Llanelhaiarn to Nevin for nearly a mile and a half, and then to strike off to the left [right] up the slope until a narrow green pathway, which winds round the ascent is reached. This pathway, which, like other ancient paths, is entirely free from the heath and gorse which cover the mountain, and which is, no doubt, the original path which the former inhabitants made use of, conducts to one of the two main entrances into the town. . . . This ascent is easy; while any other more direct, from the village below, is not only much more steep, but is impeded by large sheets, if the term may be used, of loose stones of considerable size, over which it is necessary to pick one's way with much caution. At first sight these sheets of stones, which occur at intervals, one above the other, might be thought to be accidentally formed from stones rolled from the summit at various times, but on closer examination this will be found not to be the case. It is noticed that they occur on that portion of the mountain which, although not inaccessible, does not admit of any very rapid ascent. To retard still farther such an ascent, these sheets of stones, which occur here and there, as if designedly arranged, are particularly well adapted, for, even as they now exist, it is impossible to cross them without carefully picking one's way. In doing this, the attack would be exposed to the missiles hurled down from the higher ground by the defenders, who should be, from their situation, protected from whatever missiles might be launched against them from below. In those days there was no such thing as clearing the battlements of defenders preparatory to the actual assault in the case of these hill fortresses, so that the only chance of success was to lose as little time as possible in traversing the intervening space. The Gaulish attack was, under all circumstances, generally of this kind, depending most on the rapidity of the first charge. . . . Even a slight impediment,—slight enough to stop an advance at full speed, even for a short time,—was of importance to the defence; so that, in M. Le Men's opinion, the double row of stones across the neck of land that separates Castle Coz from the mainland, was considered sufficient to baffle the assailants. The same motive led to the fixing numerous pointed stones that stud the only two accessible plateaus by which the fortress of Pen Caer Helen could be assaulted. (See *Arch. Camb.*, 1868.) These are neither high nor close enough to stop all advance; but they are admirably arranged with a view to making it necessary to use great precaution in advancing. Professor Babington has also given an account of the still more remarkable instance in the Isle of Arran off Galway. Here tall upright slabs of stone ["sharp upright stones" in the paper-

* *Arch. Camb.*, 1871, fourth series, Vol. II, pp. 70-72.

Digitized by Google

by Prof. B.] are so closely set that progress through them must have been so difficult and tedious that unless both parties could equally annoy each other by missiles, a successful assault would seem hopeless. In the same way the large sheets of loose stones protected the approach of Tre'r Ceiri, and there can be little doubt but that they were placed there for that very purpose. The only two other explanations of their presence are that this supposed arrangement is nothing but a collection brought down from time to time by accident or natural agencies, or are the scattered and spread *débris* of walls once standing. The first explanation is hardly admissible when the character and grouping of these masses is considered; nor is the second more admissible, for such detached walls built at intervals so far below the main works would have made as good cover to the attack as to the defence, if they were once turned. Mr. Jones Parry has not alluded to these groups of stones, which would hardly be observed unless the ascent was made across them. Had he taken that route at any time during his visits to the summit, he must have been struck with the evidence they exhibit of design, and how successfully the design was carried out." On reading this description, the author wrote to Mr. Barnwell, informing him of the discovery of the escarpment under the upper edge of the Worlebury *talus*, and asking him whether he thought it probable that similar escarpments might exist under the sheets of stones on Yr Eifl; and whether any attempt had been made to explore them. He replied thus:—"The sheets of rough stone are to my mind always sheets, and so placed in *échelon* fashion as to guard the approach on that side, as the attackers must have had to pick their way, if they did not want to break their legs." Of course, the question can be settled only by exploration; but, if these sheets of stones were always merely such, it is probable that the material, furnished almost *in situ* by natural agencies, was artfully distributed, the better to suit the purposes of the defence.

38. In paragraph 32, *supra*, reference has been made to a *talus* along the foot of the range of rocks on the southern side of Carn-goch. This is so very rough, and lies so close up under the rocks, with a ragged upper edge, that it is evidently nothing but their waste, lying just as it fell. It therefore throws no light on the problem presented by some features of the *talus* at Worlebury.

PITS.

39. Except at Chastel-coz, no pits have been found within or near any of the camps to which reference has been made in the foregoing part of this appendix.[6] Several of them, however, contain hut-circles, for which see the following section. As Mr. Warre has compared the pits in Worlebury with those in the Brittany camp, it will be convenient to begin by gleaning the account of the latter given by its explorer, M. Le Men.*

[6] Perhaps they may be discovered in Pen-y-gaer; for Mr. Prichard, in his account of Braich-y-ddinas, p. 231, says:—"The interior of the town is pitted with a number of circular hollows edged round by banks and protruding stones, marking with certainty the sites of dwellings."

* *Ibid.*, 1870, fourth series, Vol. I, pp. 288, 289, 290, 291, 305.

Digitized by Google

40. "The whole surface of the platform [within the walls] especially the western slope, is marked with shallow depressions of a somewhat rectangular outline, and surrounded with a ridge of earth of greater or less height. These depressions are the sites of ancient dwellings, and are so numerous, and so regularly arranged, that they remind one of the cells of a beehive." Their number has been estimated at between 150 and 200; and they occupy a space so limited, that the intervals between them must have been very narrow. From want of room, "several dwellings have been established outside the parapet on the steepest slopes." "The ordinary dimensions of the rectangular sites were 16 feet in length, and 10 feet in breadth. They had not the carefully executed masonry of the [larger] houses [described a little farther on], but were simply hollows sunk in the ground down to the bare rock, varying in depth from 2 to 2½ feet." "The walls are simply the sides of the natural rock, except where, in some instances, occurs a kind of dry masonry of small stones roughly put together. In the majority of cases the fire-places are of circular form, and of little more than a yard in diameter, and placed about 6 inches under the level of the ground [rock-floor], being surrounded by pointed stones placed upright in the ground." Intrenchments, common in Finistère, and usually assigned to the Middle Ages, in and near which are often found traces of similar dwellings, are strikingly like Chastel Coz. "A group of six houses alongside of the third [innermost] wall . . . deserves more particular notice." The first two are described, *supra*, paragraph 27. "The third, situated a little more than 2 yards to the east of the main entrance, is of rectangular form, 30 feet long by nearly 17 feet broad, touching the rampart, and constructed of flat stones of a moderate size sunk in the ground with their sides touching. Other stones are placed above this first course, or range, so as to form as regular courses as the material [granite] permitted." "About 32 yards to the west of the main entrance occurs the most important structure of the whole fortress. Rectangular in form, like the preceding one, and also resting against the ramparts, it measures 14 yards long by 9 yards broad. The walls, nearly a yard thick, are of dry masonry, but the stones are smaller than those used in the building [last described], and are arranged very carefully. The fire-place in this house differed altogether from those of the other houses. It occupied the south-west angle of the chamber, and was of rectangular form," 4 feet 8 inches in length, and 3 feet 3 inches in breadth. It had two blocks of unwrought stone on the north and east sides of the corner, with a third stone inserted in the wall, near the angle, about a foot from the floor. "A building, of the same rectangular form as the preceding, is placed about 12 yards from it, and constructed exactly in the same manner as [that described last but one], but measuring only 5½ yards by 3 yards." In addition to the circular, central fire-place, above described, "a second fire-place was also found in this house, with cinders and charcoal upon it. It is formed of a large stone placed against the wall on the south side." "No trace of doorway or staircase was found in any of the houses examined."

41. When we consider the sizes, the shapes and the shallowness of these pits which,

Digitized by Google

with their walled linings and hearths, were manifestly used as dwellings, it becomes evident that they bear but little resemblance to the much smaller, less shapely and deeper, unlined pits at Worlebury, save in the facts, that both occur in a fortified inclosure, and that all alike have been sunk partially in the surface-rock. Hence, little, if any light is, by the comparison, thrown on the problem presented by the latter. The only structure in our camp which can suitably be compared with the "houses" at Chastel-coz is the rectangular pit described in Chapter II, paragraph 68. It is, however, destitute of any trace of a fire-place; but, in other respects, seems to have been suitable for a dwelling.

42. Before passing on, it may be well, in this connexion, to describe the pit-chamber on St. Kew's Steps, which, in size and plan, and in the circumstance that it is lined with stone-work, has much analogy both with the oblong chamber at Worlebury, and with some of the excavated "houses" at Chastel-coz. It is sunk in the floor of a small landing, between the steps and an impending range of rocks forming one side of the ravine. Its bottom is nearly level, except the middle portion, (rather more than half the area), where the rock has been removed, leaving a shapeless, ragged pit, 5 ft. 6 ins. deep, and now partly filled with stones. There is something suggesting an opening at the bottom to a passage under the rocks. The size of the chamber is 18 ft. 10 ins. by 11 ft. 8 ins., and its sides are lined with well-built and somewhat coursed masonry, the present height of which above the floor is, at the south-west corner, 4 ft. 10 ins., at the north-west corner, 3 feet, at the south-east corner, 2 ft. 2 ins., and at the north-east corner, 1 foot. In the south-west corner I found a small patch of plaster adhering to the wall. The eastern end of the chamber (that toward the steps) is formed by a wall, varying from 2 ft. 3 ins. to 2 ft. 6 ins. in thickness, faced on both visible sides, and now standing but a few inches above the outer surface.

43. For nearer analogues of the pits in Worlebury, we must clearly look elsewhere. By the kind favour of the late Mr. William Long, F.S.A., of Wrington, the author has been privileged to make use of his manuscript-notes recording the progress and results of some excavations which he made in the year 1856, on Walton-down and the Common-down, near Clevedon, Somerset.[7] There he discovered many pits, several of which he opened. The particulars of their dimensions and structure are as follow:—Two pits, A and B, were first opened on Walton-down. Each was found to have a walled lining about 3 ft. 6 ins. in diameter. The bottom was reached at the depth of about 4 feet. Another pit, C, on the same down (whether steened or not, is unrecorded) proved to be 6 feet in depth. A fourth pit, D, hard by, (probably unsteened), was about 5 feet across, and 5 ft. 6 ins. in depth. A fifth pit, E, also on Walton-down, was found to be only 4 ft. 6 ins. in depth. Another, F, Mr. Long says, had "star-like depressions running into it, one to each quarter,

7 Some particulars of these have already been published in the *Arch. Journ.*, 1859, Vol. XVI, p. 157, in a paper entitled Investigation of Barrows on the Mendip Hills, by the Rev. H. M. Scarth.

Digitized by Google

viz., N., S., E. and W. On following a passage, north-east, we came to a stone chamber, G, formed of very large fire-stones. On the inside the depth was 17 inches, and its breadth 15½ inches. The large stone at the door was 6 inches thick. The crown of the aperture had a roof of solid stone. A paved passage, about the width of the opening, led to it. The entrance to the hole was 7 feet from the centre of the central hole, and 10 feet from the surface of the ground. On further examination, we found the floor of the central chamber [the one first entered] paved with thick stones similar to those forming the [lateral] chamber. We had not time to follow the other chambers." Indications of several pits were observed in and about the *enceinte* and outworks of an earthen inclosure on the Common-down, on the opposite side of the valley of Walton. Of those opened, one, H, of two that were within the circumvallation, was found to be lined with stone-work. It is much to be regretted that we have not a more complete description of the structural features of these interesting pits which, in some particulars, seem closely to correspond with the Worlebury ones. Mr. Long also notes that he has observed "many rock-pits, like those on Worle-hill, upon Wrington-common, and in the plantation on the highest part of the north side of Cleeve-combe." These have not yet been opened.

44. A few pits of much the same size, and probably used for similar purposes, were accidentally discovered within the lines of Maiden-castle, in Dorset. It is thought that many more remain undiscovered. A farmer, making a sheep-pond, "found [within its small area] no less than seven round pits—very round, very clearly cut, and about the size of wells, and from four to seven feet deep. . . . In one instance, a pit was begun to be excavated, and evidently abandoned, because it cut into the circle of another, which was an older pit, but still not so old that they could think fit to dig into it."*

45. The only other instance,[8] out of Somerset, of pits exactly resembling those at Worlebury, of which the author has been able to find an accurate record, is furnished by the camp on Mount Caburn, near Lewes, examined by Maj.-Gen. A. Lane Fox, in the autumn of 1877 and the summer of 1878. The following particulars of the pits themselves are extracted from his account,†—it being premised that the only difference between the two cases appears to be that, at Caburn, the pits were sunk in the chalk, at Worlebury, in the mountain-limestone. "Four were circular, from 5 to 7 feet in diameter at top, and somewhat less at the bottom; five were oval, 6 to 7 feet in length at top, and of various breadths. Three oblong, averaging 6 by 4 feet, and one an irregular oblong of about the same dimensions. The pits averaged 5 feet in depth, the deepest being 6 feet 2 inches,

---

[8] Pen-pits, in Somerset, and those at Glaisdale and other places, in the north-riding of Yorkshire, have been proved to be nothing more than excavations made in search of stone and minerals.

* *Proc. Som. Arch. Soc.* for the year 1870, Vol. XVI, part i, pp. 22, 23.

† *Archæologia*, Vol. XLVI, part ii, art. on Excavations at Mount Caburn Camp, by Maj.-Gen. A. Lane Fox, F.R.S., F.S.A., pp. 423-495.

Digitized by Google

and the shallowest 3 feet 6 inches. . . . The sides of the pits were rudely excavated, some more so than others, and no attempt at dressing was observed in any of them; the angles of the oblongs were slightly rounded, except" in one case. "In most of them a man might have laid down crouched up at the bottom, but in" three cases "the bottoms were too small to have contained a human being in any other posture than squatted in a very contracted form, with the back and knees resting against the opposite walls; this at once dispels the idea that the pits themselves could ever have been intended for habitation. There was no puddling in any of them except" in one instance "where the bottom appeared to have been puddled with clay, but only in one spot about 2 feet square in the centre."* These pits occur in groups of from 10 to 20. In one case, as at Worlebury, three pits are quite close together; and, in two cases, two pits are similarly associated. In one of these cases, "the space between them was 2 feet 6 inches, divided by a low ridge of the undisturbed chalk,"† just as between the nearest pair in the Worlebury triple-group. "No communication between them could be traced. The sides were very evenly cut, and they were both of the same depth, and shallower than the others, which is in favour of their being in some way connected."‡

HUTS.

46. The two or three inclosures referred to in Chapter II, note 32, as possibly similar to the small building seen in the camp by Mr. Bloxam, whose account is quoted in the same note, were found by Mr. Brice, a builder, on the sites of Nos. 2 and 3, Royal-crescent, Weston-super-mare, and described as oblong, inclosed, pitched places, about 12 feet, or so, by 6 feet, with dry, unmortared, rough stone walls, about 3 feet high and 18 inches thick. The pitching was very much worn, as if by the feet of animals. The courts were not contiguous, but detached from one another: and some pitched spaces were not walled. It is probable that all such buildings are much less ancient than the camp itself.

47. Whether or no these should be regarded as huts, they differed much from the ordinary form of those hut-circles which are frequently found upon our British wilds. The affinities of these are with the ring-banks which are said to have surrounded the Worlebury pits; even if their structure and use cannot be shown to have been identical. They are usually of one type. Their diameters vary much—from 9 feet (or less) to 27 feet. The area is seldom sunk—and then but slightly. The inclosing wall, more or less circular, is from 2 to 4 feet in height and from 2 ft. 6 ins. to 4 feet in thickness. Generally, it is revêted, within and without, with slabs of moor-stone set on edge; the hearting being of turf, or sods, or earth and stones. A doorway facing nearly south, with rude stone jambs and a lintel, gives access to the dwelling, within which remains of hearths, and sometimes

* *Ibid.*, pp. 427, 428. † *Ibid.*, p. 440. ‡ *Ibid.*, p. 440.

Digitized by Google

of stone bedsteads, are found. On the top of the ring-wall was commonly erected a tent-like roof, framed with poles or branches of trees laced together and covered with thatch or turf. Such huts are described by Strabo,* as used by the Gauls; and not very dissimilar are those pictured on the Antonine column, where, however, they are represented as having upright wooden walls resting on the ground, and surmounted by thatched dome and lean-to roof; the latter apparently covering a lower rectangular *annexe*, probably a dormitory;—an arrangement often occurring among the Irish 'cloghauns'. King says† that, in his day, near Llandaff, there were several modern pig-sties, of peculiar form, answering very closely to Strabo's description;—perhaps a survival of the native fashion of dwellings of that remote time. Sometimes, two or more of these huts are contiguous, and, practically, under one roof. In such cases, the circular type becomes more or less disguised, and is frequently mingled with rectangular or other plans. It is only in districts where well-stratified stones are at hand, that such huts can be roofed in the bee-hive form.

48. Are the Worlebury pits, and the slight banks partially surrounding some of them, the remains of such dwellings? As to the pits, though, on occasion, they might be used as hiding-places, (if it could be deemed possible so to secure a temporary immunity from pursuit), they were plainly not adapted for habitation. Even the largest would provide only very restricted accommodation: while the smallest would afford room for no more than one man in a sitting posture. For what purpose, then, were these holes made? Evidently, for the storage of food and other articles:—a supposition which receives ample confirmation from the fact that deposits of grain and sling-stones were found in many of them. There are numerous references to this practice in recent, as in ancient times. In some of these cases, the pits are said to have been sealed with a layer of straw covered with earth: others were protected by some kind of roofing. This appears to have been the mode adopted at Worlebury; and the ring-bank, which may be regarded as a rude form of hut-circle, may have served at once to exclude water, and to form a foundation in which to set the poles of the ancient booth.[9] Whether this was designed to shelter a habitation, as well as to cover a cellar, is a question that admits of some doubt. The annular space around the pit would not be roomy; and there would be no convenient place for a fire.[10] Moreover, it seems

---

9 The writer measured the curves of some fragments of charred fir-wood which were found in the pits, and calculated that they had been portions of a pole about 4 inches in diameter.

10 It is impossible to accept, as a solution of the problem, Mr. Jackson's too ingenious restoration of the steened pit, of which he gives a section as frontispiece to the *Visitors' Handbook to Weston-super-mare and its Vicinity*. Its author cannot have considered that a fire in the middle of the floor of a small pit, walled around the lower part, would have very little draught; and, from this circumstance and its low position, would fill the hut with smoke. Moreover, it could not be confined to the middle, but would soon spread over the whole pit, and choke it with ashes: meanwhile, the lime-stone steening would be as rapidly and effectually calcined as would his "lias cooking-plates"!

The following account of two pits in Wilts, discovered in 1884, may possibly throw some light on this matter. "On the down belonging to the farm occupied by Mr. James Wentworth, at Beckhampton, near Devizes, an ancient British dwelling pit has been

* *Geog.*, B. IV. † *Munimenta Antiqua.*

Digitized by Google

probable that, in this case, the wattled roof sprung almost immediately from the ground; which would limit the internal height. This assumption rests upon the absence of good evidence as to the existence at any time of the ruins of ring-walls, or of material sufficient for their construction. No traces of such walls can now be found; and many of the pits have not even the remains of banks around them. If it be said that these ring-walls were destroyed, and the materials cast into the holes, as Mr. Bloxam thought, a sufficient answer is given by stating that the cubic capacity of a pit filled to the top would be only about one-third of that of the walling of a hut-circle of very moderate height and thickness. The quantity of stones thrown into the pits is accurately measured (in the case of those which were quite emptied) by the heaps of rubbish thrown out during the openings of half a century ago; most of which would hardly be noticed on a casual inspection. Had the pits been intended for habitation, surely many of them would have been dug in the ample spaces outside the limits of the camp. Not one, however, has been found in the suburbs.* It will probably be conceded, then, that there is warrant sufficient for limiting the function of these booths to covering the pits, and occasionally sheltering human occupants (probably a small garrison) in times of peace: for this camp must be regarded as only the citadel of a people who had an abundance of "eligible building-lots" on sites much more genial than those furnished by its naked and rocky heights.

49. It may be of interest to compare the apportionment of hut-circles, or their equivalents, in several of the camps herein referred-to. In Grimspound (4 acres) there are 24, or 6 per acre; in Worlebury ($10\frac{1}{4}$ acres) there are 93, or 9 per acre; in Braich-y-ddinas (13 acres) there are 170, or 13 per acre; in Tre-ceiri (5 acres) there are about 116, or 23 per acre; and in Chastel-coz ($2\frac{1}{2}$ acres) there are said to be at least 150, or 60 per acre.[11]

---

discovered. The dwelling consists of two circular holes sunk in the clean chalk, adjoining and intersecting each other. They are about $5\frac{1}{2}$ feet and 5 feet in depth, and 5 and 4 feet in diameter. On the floor of the larger pit were found the fragments of an earthen cooking vessel resting on three stones; and under it the ashes of the fire that had been used in boiling the pot." Several other relics, indicating human occupation, were likewise found. (Mr. Cunnington, in the *Wilts Archæological Magazine*, Vol. XXIII.) Nothing being said as to whether or no a hut-circle inclosed either or both of these pits, the data are too few for restoring the dwelling of which, it was thought, they formed a part. The example is here introduced to show under what circumstances a fire might be arranged somewhat as supposed by Mr. Jackson. In this case, however, it will be noted that the cooking-pit was, apparently, not stone-lined; and the difficulty about draught and access was got over by intersecting the twin pits. Perhaps only one of them was under a roof: but it must not too readily be taken for granted that either of them was used as a habitation.

It is not, however, necessary in all cases to postulate a fire within a hut, in order to endow it with habitability. The author of *Flint Chips*, already quoted, adduces (pp. 58, 59) instances—some from warm climates—of the custom of cooking outside the hut. Perhaps this may have been done at Worlebury: and, doubtless, those of our hardy predecessors, whom circumstances may have induced, perhaps temporarily, to sojourn there, were well able to bear the occasional inclemencies of our climate with no other shelter than a wretched wigwam destitute of an interior hearth.

11 These areas are deduced from the scales attached to the published plans. The number of pits in Grimspound is taken from the plan published by the Devonshire Association, who have recently examined all of them; those in Tre-ceiri and Braich-y-ddinas have been counted from the plans of those fortresses published in *Archæologia Cambrensis*; the number for Chastel-coz is the lowest estimate by M. Le Men, who, however, shows only 120 in his plan.

* See Chap. II, par. 67.

Digitized by Google

Only a small portion of the pits on Mount Caburn having been opened, it cannot be included in this comparative list.

WATER-SUPPLY.

50. Upon this vital question, it has been usual for antiquaries to reason, that, where no natural source existed within the circuit,—or, at least, within the range of protection of a strong-hold,—such could not have been a permanent settlement. This is plausible, but not altogether true; for there are many instances of ancient cities, on elevated sites, whose inhabitants drew their supply of water from streams or springs so far from the ramparts that they might easily be cut off by a besieging force. Commenting on this fact, Sir William Gell says*:—"The custom of leaving the principal supply of water without the walls of the more ancient cities is remarkable; and the reason for it has not yet been satisfactorily explained.[12] The water, which supplied Alba Longa, lay in a deep glen, and was therefore scarcely defensible; but the springs of the Scamander at Troy, of Enneacrunus at Athens, of Dirce at Thebes, and innumerable others, prove that such instances were common." It was so at Bethulia: for it is related† that the besieging general was entreated to "let thy servants get into their hands the fountain of water which issueth forth of the foot of the mountain; (for all the inhabitants of Bethulia have their water thence): so shall thirst kill them, and they shall give up their city; and we and our people shall go up to the tops of the mountains that are near, and will camp upon them, to watch that none go out of the city." The result was that the citizens were thrown back upon their reserves of stored water, until "the cisterns were emptied, and they had no water to drink their fill for one day: for they gave them drink by measure." That this supply was wholly dependent on the weather, is clear from the statement that Judith was asked to pray "and the Lord will send us rain to fill our cisterns, and we shall faint no more."

51. It may be of use to append such particulars as it has been possible to gather with respect to the water-supply of the camps referred-to in the preceding pages; including also a few others, of which nothing has been said. Some of the facts have been gleaned by the personal observation of the writer: most of the others may be found in the articles from which quotations have already been made; so that it will be needless to encumber the page with special references to them.

(a) *Camps with water-supply within the ramparts.* Cadbury, near Wincanton,—two springs in the ditches; Braich-y-ddinas,—"a well, cut in the live rock, and always filled with water supplied by the rains, and impending vapours;" Chywoon-castle,—a shallow well,

---

[12] Need we go farther for a sufficient reason than to the facts, that, for the sake of security, ancient cities were commonly built upon hills; and that the most copious springs usually issue in valleys? See also, *Supra*, Chap. II, par. 72.

* *Topog. Rome*, Vol. I, pp. 34, 35. † *Judith*, Chap. VII, vv. 12, 13, 21; Chap. VIII, v. 31.

Digitized by Google

scantily fed in the same manner; Grimspound,—a short length of a stream included within the walls; Carn-goch,—"a shallow pool of water, formed by the natural drainage of the surface;" Norton-camp, near Taunton,—a pond in the line of the main embankment, similarly supplied; Mount Caburn,—a deep well.

(b) *Camps with water-supply without the ramparts, but within the limits of their protection.* Chastel-coz,—a spring, among the rocks, on the western side of the fortress; Dinas-dinorwig,—"a spring enclosed by a slight outwork, supported in parts by large stones," in a hollow where "the ground sinks abruptly at the northern end, where a slight projecting rocky mound forms an exceedingly strong post;" Hamdon, Somerset,—a spring in the great re-entrant angle;[13] Hardknott *castrum*, Cumberland,—a small stream, a short distance from the walls.

(c) *Camps with water-supply at a considerable distance from the ramparts.* Dolbury,—a stream at the foot of the hill, partly protected by a small camp on the other side of the gorge;[13] Brent-knoll, Somerset,—a spring at the foot of the hill; Orchard-castle, Somerset,—the same.

(d) *Camps without visible water-supply.* Of Tre-ceiri, though unconnected with any spring or stream, Mr. Barnwell thought that "as to the supply of water, there would be no scarcity, except in unusually dry seasons." He does not, however, say to what source he would look for it. We have no account of any near supply of water at Neroche, Somerset; nor at Pentyrch; nor at Dúnbeag. It is recorded that "there are no springs nor wells within" the forts in Aran.

---

[13] At Hamdon and at Dolbury, within the rampart, there is a hollow in the lowest part of the inclosure, which was probably made for the storage of rain-water.

ADDENDUM ON RAMPARTS.

52. Since the date of the first edition of this work, the Rev. Hugh Prichard has been at some pains to ascertain the structure of the ramparts of Pen-y-gaer, Gaer-drewyn and Craig-y-ddinas, referred-to in pars. 10, 13 and 15 *supra*. He discovered that portions of them had been terraced; and that (in parts, at least,) they were truly compound: a fact tending to strengthen the analogy between Worlebury and these camps in North Wales.

Digitized by Google

CHAPTER III.

RELICS FOUND IN THE PITS AND ELSEWHERE IN THE CAMP.

1. THE materials for this chapter have been gleaned from the following sources of information :—

Notes made by Mr. M. H. Bloxam in 1845; (*Archæological Journal*, Vol. I, p. 309).

Reports by the Rev. F. Warre; (*Som. Arch. and Nat. Hist. Soc. Proceedings at Annual Meeting*, 1851, p. 53; *Proc. Som. Arch. Soc.*, 1851, Vol. II, part ii, pp. 78-83; *Ibid.*, 1852, Vol. III, part i, pp. 9, 10; *Ibid.*, 1853, Vol. IV, part ii, pp. 125, 126; *Arch. Journ.*, 1851, Vol. VIII, p. 415; *Ibid.*, 1853, Vol. X, p. 60).

MS. memoranda left by Dr. Tomkins, and utilized by his son, the Rev. H. G. Tomkins, in preparing Lectures on Worlebury, delivered by him at Devizes, in 1852, at Bath, in 1876, (*Trans. Bath Nat. Hist. and Antiq. Field Club*, Vol. III), and at Weston-super-mare in 1881.

Reports of the last two of the above-named Lectures.

The chapter, compiled from these sources by the Rev. H. G. Tomkins, which was printed in the original edition of this monograph.

The entries in the *Arch. Journ.* give a few particulars which do not appear in the *Proc. Som. Arch. Soc.*; and, in one or two cases, there are slight discrepancies between the two accounts. In several points, also, the statements of Mr. Warre do not agree with those of Dr. Tomkins.

2. Those chiefly engaged at one time or another in the work to which this chapter refers were, the Rev. Francis Warre, Mr. E. Martin Atkins, Dr. J. H. Pring, Mr. Bailward, Dr. Tomkins and Mr. (later, the Rev.) H. G. Tomkins. The investigation was prosecuted in the autumn of 1851, and in May, the autumn and early winter of 1852.

Digitized by Google

3. It is to be regretted that most of the original records by Mr. Warre are lamentably lacking in that fulness and precision of statement, the absence of which deprives them of much of the scientific value which, otherwise, they might have possessed. With regard to the majority of the objects,—not only are we not told their exact relative positions; we are often even left to infer that they were found in the pits. Little more, then, can be done, than to furnish a list of these relics;—comparatively valueless, though it may be, for evidential uses.

4. In the following summary of the contents of those pits which were specially selected by Mr. Warre and Dr. Tomkins for description, the original order,—that most natural to the explorer and diarist,—the order of discovery, working from above, downward, has been exchanged for the order of deposition, from below, upward: and a classification of the pits, according to the number and importance of the objects found in them, has been substituted for the accidental time-occurrence of the early records.

5. Mr. Bloxam thus describes the pits as they appeared to him at the time of his visit:—"At present numerous small pit-like cavities or excavations of a circular form are visible, most of them no more than from 5 to 6 feet in diameter, though some are of a larger size. Many of these are now filled with stones, and there is, I think, little doubt but that these cavities are the sites of the huts of the ancient Britons, and that the stones with which they are filled are those of the walls; whilst this apparent reason may be assigned for the formation of these cavities, that they served as a protection from the cold and bitter winds of the wintry storms to which this elevated site was much exposed." "Some of these excavations are 9 or 10 feet in diameter; and in some places there appears to have been a continuous range or cluster of huts, or one much larger than usual, and in one place on the south-east side of this enclosed area is a space, whether of a circular or square form can now with difficulty be ascertained, 16 or 18 feet square or in diameter." [No. 6 on Index-plan.]

6. In the earliest notice by Mr. Warre, it is recorded that these pits were outwardly marked in general by a ring of stone-rubble somewhat raised above the general level, within which the space was "covered in perhaps the majority of instances with bleached unshapen pieces of the mountain limestone of some 12 or 14 inches in thickness mixed with smaller fragments. In the least disturbed of these depressions the stones slope[d] from the margin to the centre with a funnel-shaped appearance."

7. Referring to the pits generally, after he had opened many of them, Mr. Warre said, in effect:—"The deposits in all are nearly the same:" first, a thin layer of broken stones on the solid rock-bottom; "then, black earth, with fragments of wood" (probably charred, from what we learn elsewhere); "then, rubble and pieces of rock to the depth of about 5 feet;" lastly, "earth washed from the surface." In several pits were found "small fragments of coarse pottery, bones of various animals, some of which appear to have been burnt, and pieces of blackened wood;" and in very many pits there were considerable quantities of shore-pebbles.

Digitized by Google

8. "A large circle, 50 feet in diameter [supposed to have been at No. 3 on the Index-plan] was searched, but proved to be merely superficial. Near the centre of this were found many fragments of pottery." In the *Proc. Som. Arch. Soc.*, these are described as "of very coarse and rude texture;" and, in the *Arch. Journ.*, as "thinner, and of rather finer texture than that found elsewhere."

9. Out of the large number of pits that appear to have been opened, the contents of nine only have been specified. None of these, except the last, can be identified with any of those in the plan.

10. In No. 1 (opened on the 17th Oct., 1851),—a rude excavation in the rock, about 6 feet deep, and rather more in diameter,—there were only "a few fragments of very coarse pottery, and a little wood having much the appearance of charcoal."

11. In No. 2 were "found some coarse fragments of pottery, bones of various animals, and a piece of spar similar to that" found in the pit next described.

12. In No. 3 "was found the skull of a pig, the back part of which being close to the rock, showed that it must have been separated from the carcase before it was deposited in the hole: with it were many fragments of coarse pottery, some blackened wood, and a small piece of spar, which appears to have been rubbed down at one end, and might perhaps have been used as the head of a small arrow."

13. In No. 4 were found "just above the floor, a piece of iron about 8 inches in length, which, though quite rusted through, appears to have been the head of a large spear; many bones of animals; a good deal of broken pottery; a great number of pebbles, and many pieces of red earth, apparently containing ochre,—one of which appears to have been rubbed down into the form of a small egg."

14. "In one corner [of No. 5] was a ledge of rock, which might have served as a seat, on the left side of which were the fragments of a large earthen vessel, and on the right a small store of grain. Near the bottom of this hole was found part of a very small ring, apparently of bronze; and, quite down on the floor, under a projecting ledge of rock, apparently put away with great care, two rings of iron about an inch in thickness, and about the same in [inner] diameter."

15. In No. 6, (opened on the 18th Oct., 1851, by Mr. E. M. Atkins, Dr. Tomkins, and Mr. Bailward), which was about 6 ft. 3 ins. square and 6 feet deep, with perpendicular rock for its walls, above some pebbles resting on charred wood which was "at the bottom of the cavity," and "at about 5 ft. 6 ins. below the surface of the ground, was found a human skeleton lying on the right side, with the head to the N.W., in a very decayed state," yet "nearly perfect," except "the lower part of the legs, which had disappeared." The skull had "three cuts entirely penetrating the bone, and evidently inflicted by some heavy and very sharp weapon. The collar bone, and the left arm, a little below the shoulder, also bore the marks of severe wounds, apparently from the same cutting weapon. One incision is of a very peculiar form, as if inflicted by an instrument whose blade was

Digitized by Google

terminated by a kind of pointed tooth,—the incision being of this shape c═══ abrupt and rounded at one extremity only."

16. In No. 7 pit, (opened on Tuesday, the 28th Oct., 1851), at the bottom, was "a large quantity of wheat and barley, which seems to have rested on a flat board, the two sorts of grain having been kept separate from each other by thin pieces of wood placed between them. With this grain was found a small piece of what" appeared to be "part of a sedge mat, or perhaps basket, in which the grain might have been kept." Above the grain was "the usual deposit of black mould, and pieces of stick, such as might have been used in the construction of a wattle roof." Higher, were portions of a human skeleton, which had lain on its face; "and about 8 or 9 inches below the jaw, lay an iron spike, about 4 inches long, which appears to have been the head of a dart or javelin." The human bones which remained were an "under jaw, the atlas vertebra, the bones of one arm and hand, and those of the right foot, in a very perfect state." A little above these human remains, and "at about 5 feet from the surface," were "the jaw of a pig and a few bones" [of the same animal?]. This pit is described as much wider than most of the others, and "not nearly so dry; and those bones only were preserved which had fallen in the least damp spots."

17. In No. 8,—one with steps of rock, (opened on the 21st May, 1852),—"were found the skeletons of two men, in the attitude, apparently, of a struggle; the skull of the lower being broken in against a sharp angle of rock at the bottom of the pit." This skull is that shown in Plate XI, fig. 1.

18. Of No. 9,—the steened pit, the most interesting of the group, (opened on Monday, the 21st Oct., 1851, by Mr. E. M. Atkins, Dr. Tomkins and Mr. Bailward),—we have two accounts, not agreeing in all particulars;—that of Dr. Tomkins, who witnessed the work, and whose memoranda may probably be trusted, as being both fuller and more accurate; and that of Mr. Warre, who, it would seem, was not present at the opening.

Dr. Tomkins' account runs thus:—On "the floor of natural rock, were laid a few small laminæ of lias about the thickness of common tiles, and some charred wood," over which "in the centre of the cist, [walled receptacle], was a deposit of perhaps half a peck of charred corn, wheat and barley," and "a number of pebbles resembling those found on the nearer beaches. Some fragments of red substance resembling burnt ochre were found on, or near, the floor of the cavity, and, below the burnt deposits, a small portion of yellow unburnt ochre." Immediately above the pebbles, were found three skeletons, the uppermost "one, that of an adult male, of large stature, the humerus being 14 inches, and the femur 19 inches in length; the other two of smaller growth." "The bones of the two smaller skeletons show no marks of violence. The last [lowest] body lay with its head on the north-west side of the cist. The cranium of" the second "lay toward the south end; and the body had been interred on its left side, with the vertebral column in close contact with the east side of the wall [the wall on the eastern side], the arms extended to the westward. The larger skeleton lay on its right side with the face eastward," its cranium

Digitized by Google

about six inches from that of the second skeleton, "the vertebral column extending towards the north, and the femora doubled, so as to point south-easterly. A deep, clean incision was found to have penetrated the cranium, [Plate XI, fig. 2], and produced a fissure of considerable extent, and an incision was found on one of the femoral bones. The bones of the cranium were much displaced by masses of stone apparently forced against them, one of them having completely driven in the base of the occipital bone, so as to force its suture out backward. The end of the left clavicle was forced up into the concavity of the lower jaw; the cranium was much displaced from its natural position on the vertebral column, and great displacement of many bones had been occasioned apparently by stones having been heaped into the cavity with the bodies at the time of interment." The three skeletons were contained in "the lower part of the pit, lined with masonry." Above were "a quantity of fragments enlarging in size as the excavation was deepened."

The following *conspectus* of the order of superposition of the contents of this pit is adapted from that, based upon Dr. Tomkins' account, which was inserted by the Rev. H. G. Tomkins in his chapter in the first edition of this work; but the form is slightly altered; and it contains additional particulars taken from the records.[1]

(8) 3 ft. 6 ins. of stones, increasing in size with the depth, to top of steening.

Depth of steening 27 inches.

(7) 4 inches of earth.

(6) Large skeleton lying on right side; head nearly S., and 6 inches from the one below it; face eastward; vertebral column N. and S.; legs drawn up; femora pointing S.E.

(5) Skeleton lying on left side; head S. to W.S.W., and 6 inches from the one above it; vertebral column close to east side of pit; legs drawn up; arms extended westward.

(4) Skeleton with head N. or N.W.

(3) Shore-pebbles.

(2) In the centre, about half a peck of charred wheat and barley, mingled with small bones,—apparently of birds.

(1) Thin plates of lias and charred wood resting on the rock-bottom.

Total depth of pit, 5 feet 9 inches.

Mr. Warre says:—"Immediately upon the rock was a quantity of wheat mixed with a little barley, quite black, but whether from the action of fire or from decay, is not certain. Mixed with the grain" were "some small bones, apparently those of birds." Above the

1 The *conspectus* in Mr. Tomkins' Bath Lecture, which embodies Mr. Warre's account, differs from the above in the following particulars:—(1) and (2) change places; corn at bottom and lias above, *v.* lias at bottom and corn above: (3), a "layer of broken stones", *v.* "a number of beach pebbles": "A quantity of dark mould" is interposed between (3) and (4);—a likely accumulation: "Six inches of earth" are interposed between (4) and (5): Mr. Warre says nothing about "earth"; and, as there is not room in the depth for such a stratum, or interval, it is probable that (not having been present at the time) he misunderstood a part of the description given to him by others. It is also most improbable that there should have been such a space interposed between the bodies.

Digitized by Google

grain were "thin plates of lias, a stone not found on Worle Hill."[2] Above the lias was "a layer of broken stones;" then "a quantity of dark mould;" and on this "a skeleton, the head lying nearly due N." About 6 inches higher were "the remains of two" other "skeletons lying almost across each other, the head of the upper one nearly S., and that of the lower, W.S.W.; they were lying on their sides, with their legs drawn up. One of these skeletons bore marks of great violence, the skull being gashed with a sharp cutting instrument, and fractured by a large stone which lay upon it; part of the collar-bone was driven up into the arch of the under jaw, and the left thigh was severely wounded." The upper two skeletons were "about 4 inches below the top of the masonry. With the skeletons were a few horses' teeth."

19. In his Lecture, 1871, Mr. Jackson says that in one of the pits "were the lumbar vertebræ of a young person with ossified cartilages—apparently the mark of servile labour." [This is at the Taunton Museum.] He adds that "the Albert Memorial Museum possesses the much bruised skull of a youthful man or adult woman, with axis and atlas ossified to each other, and to the skull." He farther specifies "the jawbone of a child about seven or eight years old, (its lower incisors not being cut);" and adds that "in both museums might be seen examples of decayed teeth." Among the pit-finds, Mr. Jackson mentions "a dagger-knife",—an article not included in Mr. Warre's lists.

20. The remaining finds (including some which have been mentioned above) are gathered by Mr. Warre into mere lists, without any clue to the positions in which many of them occurred. They are as follow:—"Three kinds of burnt grain, wheat, barley, and some sort of pulse; more completely burnt at the top than below; a piece of burnt wood, with holes drilled through it;" fragments of "wooden ornaments; beads [whorls] of stone and burnt clay; one bead of blue glass; a large quantity of pottery, including fragments of three vessels which have been restored; several flint flakes, [cores], prepared for arrow-heads; iron spikes similar to the one found piercing one of the skeletons, [the one in No. 7 pit?], which were probably the heads of very rude javelins; two very good iron spear-heads; a large iron spear-head or pointed ferule, in which is still seen part of the shaft; fragments of bronze; a quantity of bones of animals and water-fowl; bones of oxen which appear to be those of the Bos-longifrons, a species which became extinct in these islands at a very early date, though certainly existing here during the British period; bones of very small horses;" and "many skeletons, several of them bearing marks of great violence."

21. The only objects found by the author in a cursory re-examination of a large number of the pits were two pieces of a cast-iron winch-handle, such as might be used for winding the rack of a kitchen-range!

22. For relics found elsewhere in the camp, the reader is referred to the second of the following lists.

---

[2] The nearest place where lias is found is at Dunball, 12 miles south of Worlebury. Dr. A. Mitchell, writing of the thin, rudely circular flags of stone which have often been found, says that they are still used in remote parts of Scotland, and always as covers for some vessel. *The Past in the Present*, p. 61.

Digitized by Google

LIST OF OBJECTS FOUND.

I. *IN THE PITS.*

Human remains. Portions of about 18 skeletons; half of them bearing marks of cutting weapons. One head was severed by a stroke clean through the atlas vertebra. A skull (in Taunton Museum) has seven sword-cuts.■ Two are in the Public Museum at Weston-super-mare.■ Part of the skull of a woman or young man, with axis and atlas ossified together and to the skull.[3] Jaw-bone of a child. Lumbar vertebræ of a young person with cartilages ossified.[3] The teeth have generally been more or less ground down (some nearly to the stumps) by masticating coarse and gritty food: some are decayed; and others have been shed. Several other fragments of skulls, jaws, etc. Hemisphere of bone (head of humerus), cut smooth on the flat surface, bored through, as if for suspension, and blackened by fire: found in a pit, 1852.■

Animal remains. Pig: skull cut off and found with the severed back part against the rock at side of a pit: jaw and other bones of pigs. *Ox:* frontal bone and horn of *bos longifrons*, and other bones and hoofs of oxen. *Horse:* bones, teeth, and hoof of small horses. *Deer:* bones. *Goat:* it is believed that some bones were those of goats. *Water-fowl* and small birds. *Limpet-shells:* a considerable number.

Of manufactured articles there were:—a bone awl or pin;■ a short section of a marrow-bone;■ a fragment of a horn comb;■ and an ornamented horn knife-handle.■

Vegetable remains. Wheat and *Barley:* at the bottom of many pits. *Pulse* or small *Pease:* ditto, but not so frequent. *Wood:* large quantities, mostly of twigs or wattle and other charred wood mingled with black mould. A piece of wood bored with two holes, the purpose unknown.■ Part of a circular armlet, apparently of wood. A flat board under the grain, and strips of wood to separate the kinds. A small piece of coarse plaited fibre or sedge matting, partially burned.■

Stone. Shore-pebbles of generally uniform size, fit for the sling, at the bottom of very many pits, and among the stones of the ramparts; occasionally broken. A spindle-whorl of very fine-grained sandstone.■ Pieces of red ochre, one of them rubbed into a rough egg-shape. Lias: thin plates under the grain at the bottom. Pieces of stone rubbers and scrapers. (These are at Taunton with the Worlebury relics; and probably came from the camp, though not mentioned by Mr. Warre.) Spar (calcareous): pieces rubbed down, suggested as for "arrow-heads," but not hard enough. Nearly three dozen flint flakes and cores; some fit for scrapers and arrow-heads:■ one good arrow-head.■[4]

---

3 Mr. Jackson says that this is "apparently the mark of servile labour." It is commonly a result of injury to or disease of the joint.

4 As recently found, the stone bruiser or rubber picked up by Mr. Thomas, and described in the Appendix to this Chapter, Note 2, may be added to this list.

■ Objects thus marked are illustrated in the Plates.

Digitized by Google

Bronze. A very small armilla, with rivet.■ Part of a very small ring.■ "Fragments of bronze:" (Warre: the fragments of *armillæ* and fork-shaped object, illustrated in Plate X?).■

Iron. Head of a spear, 8 inches long, "quite rusted through:" found "just above the floor" in pit No. 4. Two socketed, leaf-shaped lance-heads.■ An iron cone, with nail-hole: charred wood in the socket.■ Two borers or reamers (?).■ A chisel.■ Four other similar objects, two of them much corroded: (apparently those described by Mr. Warre as "iron spikes, similar to the one found piercing one of the skeletons, which were probably the heads of very rude javelins.") Two rings of iron put away under projecting part of rock at bottom.■ Fragments of two concentric circles of iron: (parts of shield?). Fragment like part of a horse's bridle-bit.■ Piece of bent iron, 6 inches long, like a part of a pail-handle; and several other pieces of very rusty iron of undistinguishable forms: (not mentioned by Mr. Warre; but in the Worlebury case at Taunton).[5]

Lead. A lump, about the size of a walnut; possibly a sling-bullet.

Glass. A beautiful smalt-blue bead found 3 feet deep, Sept. 7th, 1852.■

Pottery. A considerable quantity, rude and coarse. Fragments of a large vessel from pit No. 5, about 14 inches deep and the same in diameter at the rim. Fragments of three small vessels which have been restored.■ A spindle-whorl of baked clay.■

II. *OUTSIDE THE PITS.*

The following is a list of 11 Roman coins, the majority of a small number found by the late Mr. Sholto V. Hare, when a school-boy, in one spot, from one to two feet deep in some *débris*, on the south-western side of Worlebury, in 1833. They remained unregarded in the possession of the finder until 1896, when they were identified by Mr. John E. Pritchard, of Bristol, who favoured me with an account of them. Tiberius, 2nd br.; Nero, 2nd br.; Vespasianus, 2nd br.; Domitianus, 2nd br.; Hadrianus, 2nd br.; Marcus Aurelius, 2nd br.; Ditto, 1st br.; Julia Mamæa, 1st br.; Maximinus, 1st br.; Constantius, (2), 2nd br. All were in good preservation. It is remarkable that they cover such a lengthened period,—from A.D. 18 to 350-361.[6]

A deposit of relics was accidentally discovered in the surface-soil, within a space "not more than five or six yards" across. It consisted of "fragments of coarse Roman pottery, enough to fill several baskets; upwards of 200 coins of the later empire," mostly in "a decayed condition," among which were recognised coins "of the Constantine family

---

5 Among the articles found in the pits, Mr. Jackson includes (*Lect.* 1871) "a dagger knife." There are two fragments of knives at Taunton. Perhaps one of them may be the one here referred-to, and the other the one found (Mr. Jackson says) in St. Kew's chamber.

6 A heap of 132 copper coins, from Claudius to Valens,—A.D. 52 to 379,—were found at Wroxeter (*Uriconium*) under circumstances which indicated that all of them might have been current at the latter date.

■ Objects thus marked are illustrated in the Plates.

Digitized by Google

and of Carausius," Lucilla and Valerian; "iron nail-heads;" "a great many glass beads;" and fragments of bronze ornaments;"—the pieces of binding illustrated in Plate X?

A list of the most interesting of the objects picked up in various parts of the ruins during the author's exploration is printed at the end of the Descriptive Index.

As it is very near to the camp, he examined Picwinner (or Picwinnard) carn, which is on the highest part of the hill, a quarter of a mile beyond the outermost ditch. It consisted of loose stones, in the form of a very low bowl-barrow. These were removed all over the middle, to the natural surface, which, was excavated to the depth of a foot, and evidently had not been disturbed. Nothing of an ancient aspect was seen, except two bits of bone and three limpet-shells. Several modern articles, however, were turned out:—a tobacco-pipe, pieces of broken bottles, a pin, and charcoal, probably from a pic-nic fire. The ring of stones also was trenched through in three places; but yielded nothing more. The woodman told the author that an old man (since deceased) had told him that he remembered the time when it was customary for people coming to fish at Bearnbeck to propitiate fortune by picking up a stone on the hill, and throwing it on the carn; saying, as they did so:—

"Picwinner, Picwinner!
Pick me some dinner."

The small silver *fibula* in Plate X was found above St. Kew's Steps.

Among the "strange assemblage of relics ranging from early British to late mediæval dates," which came out of the rock-chamber on these steps, Mr. Jackson (*Lect.*, 1871) specifies "a Caroline sword-handle;" "a spur of the 15th century;" (this is at Taunton); "some mediæval pottery;" "a Saxon dagger-knife;" "and under all coarse Celtic pottery."

With the two fragments of knives or dagger-blades at Taunton (5 inches and $4\frac{1}{4}$ inches long, and $\frac{7}{8}$ inch and 1 inch wide respectively), is a piece of a reaping-hook (?), 6 inches long and $1\frac{3}{8}$ inch wide, with a ribbed back, and still retaining a very clean and thin edge. It is not included in any list of the relics. There is also a large, broad, iron arrow-head, supposed to be the one referred-to by Mr. Warre as having been found near Worle.*

Objects thus marked are illustrated in the Plates.

* *Proc. Som. Arch. Soc.*, 1854, Vol. IV, part i, p. 11.

APPENDIX TO CHAPTER III.

ILLUSTRATIVE NOTES.

1. Into this short Appendix are gathered a few records of relics discovered elsewhere, selected as illustrating, or elucidating, or contrasting with, the 'finds' at Worlebury.

2. It is remarkable that very few weapons, or objects of domestic use, have been found in any of our British camps, unless, at some time, they have been in Roman or later occupation.

Digitized by Google

3. *Dolbury.* The writer was recently shown some articles which had been obtained by digging a foot or two below the surface, near the middle of the inclosure. They consisted of fragments of unglazed pottery, not very coarse, made on a wheel, varying in colour from a light to a dark grey, and, in thickness, from three-sixteenths to three-quarters of an inch. One of them, with zig-zag ornament in parallel lines, was broken from the rim, neck and swell of an urn or jar similar to some found at other British camps on Mendip. With these were found a whitish pebble, and two flint flakes.

4. *Cadbury, (Wincanton).* Stukeley* says that "in the camp they find many pebble stones exactly round. . . . They suppose 'em stones to fling withal, fetch'd from the sea, or perhaps shot in cross-bows." A few 'sling-stones' were also picked up when the Somersetshire Archæological Society visited Cadbury in 1857. Bones of *bos longifrons*, deer and swine, have also been met with.†

5. *Castle Neroche.* In his account of this camp, Mr. Warre says that "none of the pottery discovered on the spot is of the same kind as that dug up at Worle[bury]."‡

6. *Maiden-castle.* All the pits that were opened§ were found filled with a very black, loose, fatty earth, composed mainly of animal and vegetable substances. In it were pieces of pottery, a quern-stone, and many bones, especially of red deer. A flat comb, made of bone [horn ?], with teeth cut end-wise, (*cf.* that from Worlebury), was also found.‖

7. *Walton-down.*¶ The articles exhumed by Mr. Long from the pits on Walton-down and the Common-down, near Clevedon, were as follow:—In two pits, not otherwise described, he says,—"we found charred wood and coal at about 3 or 4 feet down, a pin, buttons, and on the hill a stone celt." In the two pits, A and B, "after we had removed the surface earth and stones, we came, at about 3 feet depth, upon artificial mould, composed of burnt wood, coal, and earth, which appeared to have been saturated with animal matter. At about 4 feet depth, we came upon the solid rock:—a pin, and some small button-like things were found in one." A flint arrow-head was found on opening a hole, near the stone summer-house on the top of the hill. In pit C, "the turf was dug out, with a considerable thickness of beautiful mould. There was not much stone for the next foot or two, when we came to fragments of black pottery, burnt earth, and burnt bones, two crystals,[1] and a stone spear-head. The mould seemed saturated with animal matter, and,

1 Crystal balls have repeatedly been found with remains of the Saxon period. It is supposed that they were used as amulets, and for divination; as they still are by individuals so constituted as to be able thus to utilize them.

* *Itinerarium curiosum*, 1724, Cent. I, p. 142.

† *Proc. Som. Arch. Soc.*, 1857, Vol. VII, part i, p. 20; *Ibid.*, 1870, Vol. XVI, part i, p. 18. ‡ *Ibid.*, 1855, Vol. V, part ii, p. 46.

§ See Appendix to Ch. II, Pits.

‖ *Proc. Som. Arch. Soc.*, 1870, Vol. XVI, part i, pp. 22, 23.

¶ For an account of the pits themselves, see Appendix to Ch. II, Pits.

Digitized by Google

occasionally, one of the large worms appeared. At about 4½ feet, we uncovered two human thigh-bones; and the body soon appeared, lying with the head on its side, and on the Channel side of the hole. The body was curved round; the hole not admitting its lying at full length. With care, the skull, neck, vertebræ of the back, leg and arm-bones, etc., were got out. The teeth, which were much ground down, were perfect and sound: one had a small hole in the side of it. They appeared to be in the condition of those of a person of 30 or 35 years. The bones were not those of a person of more than ordinary stature. The head of the savage type, with high cheek-bones, cartilage of nose turning upwards, and projecting mouth. It did not appear to have been injured by any blow. Beneath the skeleton, the earth had the same appearance of having absorbed animal matter, being dark and greasy. About 2 feet below it, we came to more bones, much decayed, and a blade-bone: pottery, too, and burnt earth were found between the skeleton and the bottom of the pit; also a curious circular clay cake. No traces whatever of anything Roman." "Two spear-heads of stone" were afterward found among the earth from one of the pits;—which, is not noted. In three of the pits were found "limpet-shells in some numbers." In pit D, "the surface was depressed and bowl-shaped. Beneath the turf, it was very stony, but we soon found fragments of black pottery, which were quite hard, and not crumbling, as was the case with nearly all I had yet met with, 3 or 4 feet beneath the surface. We also found some celts, and arrow and spear-heads of stone. At the depth of a foot, we found bones of animals, a crystal, burnt wood, large teeth, arrow-heads, and a stone instrument resembling a cleaver. As we dug deeper, the ground was full of bones, jaw-bones, teeth, burnt wood, and burnt bones. In many layers, the mould was as black as peat-earth. We found many large fire-stones, baked earth, of the colour of brick, large pebbles, used, perhaps, as slinging-stones, another crystal, and a piece of black stuff, like black-lead. Amongst several large teeth, were two very large ones,—horses' teeth. The bones were of all sorts and sizes, and in great quantities. Some of them—large vertebræ—appeared to have been subjected to a very powerful heat, as they were blackened half-way through." In pit E, "were a great many very large stones, fragments of very coarse, black, gritty pottery, bones of animals and birds, horses' teeth, and an iron instrument, like the two links of a chain at the end of a small bar." In pit F, were "found pottery, glazed green, red pottery, in small quantities, iron nails, occasionally slight traces of fire, and some of the coarse black pottery, [like that] found in the other pits, bird-bones, a horn, and a jawbone." "The chamber G had nothing in it but loose earth at the bottom. In the passage to it, were several fragments of green-glazed pottery, and nails, and two pieces of tin-plate." In pit H, were found "the usual charred wood-ashes, and some pieces of pottery." The adjoining pit yielded nothing. Two other pits, 20 or 30 yards outside the inclosure, and not otherwise described, were also opened. "Burnt wood and ashes were found in both, with fragments of pottery in one, and some glazed pottery in the other." There is nothing on the spot to suggest any other idea than that of peaceful occupation.

Digitized by Google

The earthen *vallum* of the inclosure associated with these pits is too slight to have been designed for defensive purposes.

8. *Mount Caburn.* The following is taken from the paper by Gen. Lane Fox, from which has been quoted his description of the pits in this camp.* Most of the pits—sunk in the chalk—"were filled with mixed soil consisting of dark mould mixed with chalk rubble." "Fragments of charcoal were found occasionally in many of the pits." "No fragment of Roman pottery was found in any of the small pits;" but a round piece of soft Roman tile pierced with a hole, and supposed to have been used as "ruddle", was found near the surface. Spindle-whorls, of clay and terra-cotta, were among the 'finds'. There were a large number of fragments of pottery. "The ornamentation of the pottery of the finest quality resembles that of Worlebury and Cissbury. . . . I first thought that it was Saxon but now believe it may be late Celtic." "The animal remains were . . . ox, *Bos longifrons*, pig, *Sus scrofa*, horse, *Equus caballus*, goat, *Capra hircus*, sheep, *Ovis aries*, with occasional bones of roedeer, and badger;" also the scapula of a rabbit, the leg and spur of a fighting-cock, part of the bone of a dog, oyster-shells, and two mussel-shells. Some of the pits contained shore-pebbles. A sand-stone burnisher was found.[2] It is noted that these are "common in Celtic, Danish, Swedish, and Irish remains of the iron age." It is rather singular that among the relics should be a blue glass bead, which, to judge from the illustration, must have been much of the size and shape of the one found at Worlebury. Of articles of horn, there were two combs, not quite of the same type as the Worlebury specimen. Attention is drawn to the similarity between the ornamented piece of horn, found at Worlebury, of which a drawing is given, and "a knife handle of deerhorn, . . . ornamented with the dot and circle pattern,"† . . . "with a hole for the blade at the larger end and a cylindrical rivet-hole $\frac{1}{4}$ inch in diameter, very cleanly bored with a metal tool, at the distance of half an inch from the end." Of weapons and implements, there were some iron javelin-heads, two iron knife-blades, iron bills, an iron sickle, a small iron plough-share, and an iron spud-like implement of somewhat similar form. The whole of the paper from which these extracts are taken may be profitably consulted in connexion with the subject.

9. *Chastel-coz.* The following list of objects found in the ten chambers opened in this fortress (the physical features of which have been described in Appendix to Chap. II, Pits,) will furnish materials for comparison with the 'finds' at Worlebury. There were granite mill-stones, stone hammers, portions of stone axes, sharpened stones, a number of large rounded stones for throwing, more than a hundred sling-stones, quantities of beach-stones,

---

[2] It may be well to note here that a friend of the writer, Mr. T. H. Thomas, of Cardiff, picked up in some earth which, at the time of his visit, had been freshly thrown out of one of the pits, a greenstone bruiser, or rubber, $6\frac{5}{8}$ ins. long, $1\frac{5}{8}$ in. wide, and 1 inch thick. Some years ago, a similar one was found on the top of the hill, to the east of the camp, by Mr. Spencer Perceval.

* Appendix to Chap. II, 45. † Plate XXIV, fig. 25.

Digitized by Google

grinding pebbles, pestles, burnishers, round, polished, coloured stones, several flint-chips from shore-materials, with cores, fragments of hand-made pottery, baked clay spindle-whorls, a fragment of a Samian vessel (found just below the turf), a white glass ring, a bronze necklace-bead, a plain bronze ring, one inch in diameter, a bronze bodkin, part of a bronze sword, fragments of iron swords, half of a porringer, a bone button, a large number of limpet shells, and many mammalian bones.

CHAPTER IV.

HISTORICAL REVIEW.

1. IT would be easy enough to conjure up a rapid mental vision of the fortunes of this fortress, from the day when its rude walls began to rise under the hands of busy builders, through the vicissitudes of succeeding centuries, with their intervals of precarious peace, jeopardized by mutual jealousies, ever ready to flame into intestine wars; their alternations of possession and dispossession; the flow and ebb of successive waves of early occupiers—the Goidel and the Brython—whose very presence in those penless ages is more a matter of inference than of knowledge; the visits of mercantile Phœnicians, followed by Veneti in their well-built ships,[1] frequenting the port at Uphill, bringing

[1] These were of oak, fastened with iron. They had high poops and prows; were flat-bottomed, so as to take the mud well; and had leathern sails.

Digitized by Google

continental—even oriental—wares, and, in exchange, receiving lead and calamine from the Mendip mines, with other British produce; the advent of the Belgæ,[2] whose hold on the soil of South Britain was loosened only when they fell under the power of Rome; the collapse of that power; and the passage, like a troubled dream, of the dark and semi-mythic Arthurian age, from which the land was slowly awakened by the Saxon conquest and settlement; while sorely troubled by piratical descents of the ferocious rovers of the northern seas, growing into more serious Scandinavian invasions, which continued far down toward the time of the Norman conquest:—to say nothing of later stirring events which were transacted in these parts.

2. We might, perhaps, imagine a watcher on the walls of Worlebury, when threatened with danger, regarding it at first, as it were, from a distance; protected by the marshes in front against the enemy from the hills, and by the waters in his rear; save when, by some reflux in the tide of westward migration, there sailed back from Erin's shores some who had an ancestral interest in the land which his fathers had seized; or when, anon, he beheld the dreaded Dane ploughing the Severn-sea with his keels, but giving no sign as to the point on which he would suddenly swoop,—whether on thrice-unhappy Watchet, or on Combwich, or on Uphill; or whether he would pass on to the Avon, or satiate his thirst for rapine on yonder coasts of Wales. But, at whatever date, there came, to the Worleburian, a time when neither the marshes on the one side, nor the sea on the other, gave him immunity from attack; when a stronger than he overcame him, threw down his battlements, and left his hearth desolate.

3. But we must have something more definite than these dreams; and must proceed patiently to examine the evidences of every kind which may serve to correct the errors, and, as much as may be, to reduce the elements of uncertainty which, hitherto, have marred and obscured the historical treatment of the subject.

4. The task of the writer who would fain rehabilitate the Worlebury of the past, and trace its long and eventful story, may aptly be likened to that of the Israelites in Egypt, when required to make bricks without straw. In search of materials, he may awaken the echoes of heroic song, invoke ancient tradition, and scan the pages of history,—or of that which passes for history,—to find himself, in the end, thrown back upon conjecture,—or at best upon inference,—which can be corroborated or corrected only by an appeal to evidences other than literary. Excepting the estate-entries in Domesday-book, there is no direct reference to Worlebury or its vicinity in any ancient record. Yet, from grave lack of care; from giving free rein to imagination; or from desire to adorn a tale;—here, a wild theory, there, a faint rumour, anon, a mistaken interpretation, have sufficed to originate positive statements which, once received into currency, and, without farther inquiry, frequently

---

[2] It is much disputed whether the Belgæ belonged to the Gaelic or to the Brythonic branch of the Celtic race: while some, with less reason, think that they were Teutons.

Digitized by Google

repeated, have, at length, been taken for true. To subject these to a critical examination, will be to reduce them to their just value.

5. In making the unqualified assertion* that "Ostorius Scapula took military possession of the country from the Avon to the Parret, in the reign of the Emperor Claudius," Mr. Warre appears to have trusted to that interpretation of Tacitus,† which places the scene of the campaign against the Cangi, in the year 50, in this part of Britain. It may, however, be safely asserted that this allocation is a mistaken one; not only because it rests solely upon a provisional suggestion of Camden, which, ultimately, he seems to have abandoned;[3] but because it cannot be harmonized with the settled state of local affairs at the time of Ostorius' operations.‡[4] As there is no indication that the Romans utilized Worlebury; and as they certainly did not build it; we may neglect Collinson's unsupported assertion that "this was the last fortification the Romans had in this district westward."§

6. Mr. E. Smirke has stated that, "in the 4th, 5th, and later centuries," according to "history and tradition," many parts of the western coasts of Britain were visited by "*Scoti*, or Irish," who made "settlements, hostile as well as friendly," in the land. These "descents and settlements on the west coast, and even in Somersetshire, are noticed by the annalists of Ireland and Wales." "An authority, which has been treated by the best Irish historians as trustworthy," informs us "that a certain Crimhthan Mor Mac Fidhaigh, an Irish chieftain, . . . invaded the west of England, and established Irish colonies in Cornwall and Somersetshire, erecting fortresses there as far inland as Glastonbury. These settlers retained their ground long after the arrival of St. Patrick in the 5th century."‖

7. In reply to an inquiry as to the source of this reference to a particular Irish inroad, Professor Rhys has kindly pointed out the only one known to him—to wit, Cormac's *Glossary*,¶ a work attributed to the 9th century. It says:—"When great was the power of the Gael on Britain, they divided Alba between them into districts, and each knew the

---

3 Camden hesitated whether to place the Cangi in Somerset or in Cheshire: his faint plea for the former resting almost entirely upon a slight superficial resemblance of a few place-names, of quite other derivations. Bishop Gibson inclined to Somerset, as, he thought, agreeing better with the order of Ostorius' movements. It is now generally held that the Cangi dwelt in Flintshire, and, possibly, also in the neighbouring parts of Cheshire.

4 Whether (if the printed text of Tacitus is correct) the chain of forts which Ostorius had previously established between the rivers Sabrina and Antona (variously identified with the Anton, or Test, at the head of Southampton-water, the Avon, at Christchurch, Poole-harbour, the Warwickshire Avon, the Nen and the Trent) had any reference to the Somerset levels, depends largely upon the correct identification of the Antona. The context of the history does not seem to favour the supposition that this defensive line was anywhere in the south. An ingenious proposed amendment of the text (*cunctosque cis Trisantonam et Sabrinam fluvios cohibere parat*) makes it say no more than that Ostorius took measures for holding in check the tribes on the hither side of the Severn and (probably) the Trent. *Celtic Britain*, p. 80.

* *Proc. Som. Arch. Soc.*, 1861, Vol. II, part ii, p. 83. † *Annales*, Lib. XII, cc. 31, 32. ‡ See Chap. V, par. 51.

§ *Hist. Som.*, Vol. III, p. 610.

‖ Appendix to *Arch. Cambr.*, 1861, third series, Vol. VII, art. On an Ancient Inscribed Stone found at Fardel, by Edward Smirke, pp. 12, 13.

¶ Translated by Dr. O'Donovan, edited by Dr. Stokes, 1868, p. 111, *s.v.* Mug-éime.

Digitized by Google

residence of his friend, and not less did the Gael dwell on the east side of the sea quam in Scotica, and their habitations and royal forts were built there. Inde dicitur Dinn Tradui, i.e. Triple-fossed Fort, of Crimthann the Great, son of Fidach, king of Ireland and Alba[5] to the Ictian sea,[6] et inde est Glastonbury of the Gael, i.e. a church on the border (*bru*) of the Ictian sea.[7] It is there was Glass son of Cass, swineherd of the king of Hiruaith,[8] with his swine feeding, and it was he that Patrick resuscitated at the end of six score years after he was slain by the soldiers of MacCon. And it is in that part is Dinn map Lethain in the lands of the Cornish Britons, i.e. the Fort of Mac Liathain. Thus every tribe divided on that side, for its property to the east was equal [to that on the west][9] and they continued in this power till long after the coming of Patrick."[10] Truly this is a slender foundation for the assertion that Criomhthann "erected fortresses as far inland as Glastonbury." Evidently Cormac had a very confused idea of the position of that place. In the same sentence he says that Dinn map Lethain was "in that part" and "in the lands of the Cornish Britons." All that can be gathered from Cormac is that, at the time referred-to, the Irish had much intercourse with, and many possessions in, the West of England; (by which, probably, we ought to understand Dumnonia); and that they built some forts there: but there seems to be nothing to justify the conclusion that they invaded and fortified the lowlands of Somerset.

8. The next notice refers to the re-adjustments of territory which followed the battle of Deorham, in the year 577.[11] Dr. Guest, in an ingenious disquisition,* gives his reasons for thinking that these included a cession to Ceawlin of North-west Somerset, as far south as the river Axe. Dr. Freeman appears to have accepted this conclusion; and, in a presidential address,† pictures Ceawlin planting his banner on the height of Worlebury, which would be two miles within the border of the supposed newly-acquired Saxon possessions. It is, however, a mere assumption, (resting mainly on the discovery, between Englishcombe and Wells, of traces of three short lengths of a dyke, designed, Dr. Guest thought, to secure possession of the Mendip mines), that the territory ceded to the victor on this occasion included any portion of North Somerset; unless, perhaps, it were the strip of

---

5 Criomhthann Mór Mac Fiodhaidh reigned A.D. 366-379. 6 The English Channel. [O'D.]

7 Dr. Stokes remarks on this:—"Glastonbury is in the heart of Somerset; but the fact that it stands on the river Brue (which, however, flows into St. George's Channel) may perhaps have caused this geographical mistake."

8 Supposed to be Norway. [Stokes.]

9 Dr. O'Donovan thus explains the meaning:—"Such were the divisions of all the families, for each had a proportion in the east (eastern island)."

10 Patrick, who died in 472, is said to have been the first abbot of Glastonbury.

11 It is noteworthy that the three "kings", Comail, Condidan and Farinmail, who were slain at Deorham, and who, it may be guessed, respectively ruled over the three Romano-British cities, Gloucester, Cirencester and Bath, which were taken from them, had Irish names. This suggests an interesting speculation concerning the composition of the forces arrayed on that occasion against Ceawlin.

* *Arch. Journ.*, 1859, Vol. XVI, pp. 105-112. † *Proc. Som. Arch. Soc.*, 1871, Vol. XVII, part i, p. 17.

Digitized by Google

land between the Avon and Wansdyke, which, General Pitt-Rivers has shown, may have been either Roman or Romano-British, or Saxon.* That no traces of Saxon occupation have been found in the said mining-district, tends very much to strengthen the doubt as to this supposed southward extension of Ceawlin's territory.

9. We will now—still in chronological order—review six other recitals of particular events averred to have subsequently transpired, either at, or within a very short distance of Worlebury.

10. The earliest of these is thus mentioned by Mr. Warre†:—"Tradition says that about the middle of the 9th century the Danes were defeated at Brent, and fled to Brean Down, where they were blockaded by the victors till they were taken off by the sea in their ships." Unless this is but another version of one of the somewhat similar stories noticed below, it may perhaps have happened that Mr. Warre collected the particulars orally from local tradition: for I have failed to find any other notice of the event. The nearest, in point of time and locality appears to be that recorded in the *Saxon Chronicle, anno* 845:—"This year Eanulf the ealdorman, with the men of Somerset, and bishop Ealchstan, and Osric the ealdorman, with the men of Dorset, fought at the mouth of the Parret against the Danish army, and there made great slaughter and got the victory." Mr. Warre, also, in another place, speaks (but, so far as can be seen, with no better warrant) of "Uphill having more than once been destroyed by the piratical warriors of the North."‡ It is not unlikely that the Danes did land there in hostile mood; but it needs stronger evidence to establish the claim that it is historically true.[12]

11. The second and third stories are recorded by Rutter,§ as though relating to two separate series of events. They prove, however, to be but different versions of one thing; as will appear, on reference to the source whence they have been derived. One, quoted immediately from Seyer,‖ who took it from Barrett,¶ runs thus:—"Some time in the reign of Alfred, the Danes landed near Brent in Somersetshire, but were put to flight by him; great numbers were drowned or slain, whilst others escaped and fled to Worle-hill, where they fortified themselves for a time." For the latter, Rutter refers to a work in which no such record is to be found. He writes:—"In the Saxon chronicle it is related that the Danes, in 998 issued from this encampment and advanced into the plain as far as Biddesham, where they were completely overthrown by the Saxons; and their camp at Worlebury

---

12 It is probable that these inroads have left traces in local place-names: *e.g.*, Combwich, *Wick* St. Lawrence, and two which may possibly perpetuate the memory of Hubba, or Ubbo, a Danish chieftain who was slain in N. Devon in 878:—*viz.*, *Hobbs'* Boat, a spot on the river near Bleadon; and (though less likely) Uphill, which, in Domesday-book, appears as *Opopille*. *Pil*, a word still in local use, is Welsh for *creek*. An almost identical change is seen in the case of Lophill, near the mouth of the Tavy, in Devon. On a very old and curious MS. map of Dartmoor, this is written *Lobbapilla*.

* *Wilts Arch. Mag.*, 1892, Vol. XXVI, pp. 336-342.

† *Proc. Som. Arch. Soc.*, 1863, 4, Vol. XII, part i, p. 66. ‡ *Ibid.*, 1850, Vol. I, part ii, p. 3. § *Delin. N.W. Som.*, p. 55.

‖ *Hist. Bristol*, Vol. I, p. 238. ¶ *Hist. Bristol*, p. 34.

Digitized by Google

subsequently taken and burnt." Both of these entries indicate strange carelessness on the part of Rutter, who, in the first place, ignores the fact that Seyer had discredited the authenticity of the story he relates; and, in the second, neglects the verification of his reference.

12. The source of both stories is "A Discourse about some Roman Antiquities discovered near Conquest," an anonymous tract which, with a second by the same writer,[13] "A Fool's Bolt shott at Stonage," and several others, *more Hearnii*, are bound up with Hearne's edition of Langtoft's Chronicle. The following narrative is quoted from the "Discourse".*—"The first invasion of the Deanes in these Coasts was Buttendune, [Matt. Westmon. p. 179: H. Hun. lib. 5. Hist.] now Bitsham [Biddesham] on Seaverne, a little Eastward of Brentknoll, of which King Alfred having speedy intelligence, drew thither a seeming invincible Army, and beseighed by land, and also by Sea with his fleet, so long, till the Deanes had eaten up all their provision, and after that their horses, and then they endeavoured to escape away through that part of the King's Army, which lay on the East part of the River, where, in the sharp conflict, Ordemus and many others of the King's Army were slaine at the first encounter, but the Christians prevailing at length put the Pagans to flight, a great number of them being drowned and slain with the sword, and a great number of those which escaped fled to Legerester, *Anglo-Saxonice* Wirhale, now Woorle, five miles Northeast of Bitsham, where they associated themselves to a strong party of theirs, which had fortified themselves so impregnable, that the King finding it so, although he did not besiedge it, yet burnt up all things round about, that might yeild sustenance, whereby they were constrained to forsake the Country of their own accord."

13. Now, what say the Chronicles herein referred-to? Matthew of Westminster, under *anno* 895, says:—"Eodem tempore Hasteinus iniquus et cæteri pagani, quos exercitus regis Aelfredi de *Beamfleote*[14] fugaverat, disposuerunt transire ad concives suos, qui in occiduis partibus Angliæ habitabant. Arrepto igitur clam itinere per provinciam Merciorum, ad villam quandam super flumen Sabrinæ sitam, *Buttingedune* appellatam, pervenerunt, ubi à confratribus suis reverenter sunt recepti, atque in oppidum, quod ibidem construxerant, introducti: &c. . . . Et qui ex hac clade evadere potuerunt, fugiendo ad Legecestriam, quæ Anglicè *Wirhale* dicitur pervenerunt." And Henry of Huntingdon, (*Hist. Angl.*), under *anno* 894:—"Rex igitur dum illuc tendit, exercitus qui erat apud Awldre[15] invasit Estsexe, et castrum fecit apud Scobrih:[16] indeque permeantes, venerunt usque ad Budingtune juxta Savernam, et ibi castrum fecerunt; unde tamen bello repulsi, fugerunt ad castrum suum in Estsexe. Illi autem qui obsederant Exanceastre,[17] audito adventu regis, ad puppes

---

13 Variously said to have been a Mr. Jay, of Nettlecombe, in West Somerset, who died about 1684, and a Mr. John Gibbons, who was living about 1670. See *Stonehenge and its Barrows*, by William Long, F.S.A., p. 40.

14 Benfleet, in Essex, 6 miles west of Southend. 15 Appledore, in Kent. 16 Shoebury, in Essex. 17 Exeter.

* Vol. II, pp. 464, 465.

Digitized by Google

fugerunt, et in mari prædantes manebant. Quartus exercitus venit eodem anno a Nordhumbre usque in Legecestriam," &c.

14. *The Anglo-Saxon Chronicle*, which has served as the foundation of those of later date, entering more into detail, gives topographical particulars which (if any such were needed) at once disprove the imagined connexion of these events with Somerset. The following is quoted from Thorpe's translation, under date 894:—"They [the Danes] then went up along the Thames, until they reached the Severn, then up along the Severn. Then the aldorman Æthelred, and the aldorman Æthelm, and the aldorman Æthelnoth, and the king's thanes, who were then at home in the works, gathered together, from every town east of the Parret, as well west as east of Selwood, as also north of the Thames, and west of the Severn, and also some part of the North Welsh race.[18] When they were all gathered together, they followed after the army to Buttington[19] on the bank of the Severn, and there beset them on every side in a fastness. When they had sat there many weeks on the two sides of the river, and the king was west in Devon against the naval force, they were distressed for want of food, and had eaten a great part of their horses, and the others had died of hunger; they then went out to the men who were encamped on the east side of the river, and fought against them, and the Christians had the victory. And there was Ordheh, a king's thane, slain, and also many other king's thanes were slain; and of the Danish there was a very great slaughter made; and the part that came away thence was saved by flight. When they came into Essex to their work and to their ships, the remnant gathered again a great army from the East Angles and from the Northumbrians before winter, and committed their wives and their ships and their chattels to the East Angles, and went at one stretch by day and by night, until they arrived at a desolated city[20] in Wirrall[21] which is called Legaceaster [Chester].[22] Then could the force not overtake them before they were within the work; they however beset the work from without for two days, and took all the cattle which was there without, and slew the men that they might intercept outside of the work, and burned all the corn, and with their horses consumed it on every plain. And that was a twelvemonth after they had come over sea hither."

15. It will now be evident that not only was Jay's (or Gibbons') reading of the old Chronicles quite erroneous; but that, in quoting him, the modern epitomizers—not content

---

18 The whole Principality was then called North Wales.

19 A village on the right or east bank of the Severn, 2 miles N.E. from Welshpool. Dr. Ormerod was inclined to identify it with another Buttington, in the peninsula between the Severn and the Wye, nearly opposite to Chepstow; but his conjecture will not bear the test of close examination. The subject is discussed at length in a paper by the author On the Identification of the Site of Buttingtune, printed in the *Montgomeryshire Collections*, 1900, Vol. XXXI, part ii, pp. 337-346.

20 "A western city" in the original.

21 The district (still so called) between the estuaries of the Mersey and the Dee.

22 Chester was desolated, *c.* 613.

Digitized by Google

with giving currency to a baseless story—have still farther obscured the truth by adding particulars of their own. Thus, (even if Jay were right), Barrett had no authority for asserting that the Danes landed at Brent; nor Rutter for the statement that they issued from Worlebury; nor that the Saxons burned their camp.

16. A reasonable inference may be drawn from the next record. In the year 915, (or 918,—versions differing), a great naval force, with two jarls, Ottar and Hraold, entered the Severn, harried the North Welsh sea-board, extended their raid to Irkenfield;[23] but were driven back and pinned in an inclosure until they gave hostages for their departure from king Edward's dominions. "And the king had contrived so that his force sat opposite to them on the south side of the mouth of the Severn, west from the Welsh [shore],[24] as far as the mouth of the Avon east so that they durst not anywhere seek the land on that side. Then, nevertheless, they stole away by night, on some two occasions, on one occasion, up to the east of Watchet, and on another occasion, to Porlock. Then they were beaten on both occasions, so that few of them came away, save those only who there swam out to the ships; and these seated themselves out on the island of Flat Holme [some chronicles say Steep Holm] until the time that they were greatly destitute of food; and many men perished from hunger, because they could not obtain any food. They then went to South Wales,[25] and then out to Ireland; and this was in Autumn."* Florence of Worcester removes any doubt that might rest on the allocation of the shore "west from the Welsh." He says†:—"Idem itaque rex in australi plaga Sabrinæ fluminis, a Cornubia ad ostium fluminis Avenæ, opportuna per loca suum diviserat exercitum, ne piratæ regiones illarum vastarent provinciarum." We may, with some assurance, conclude that, among all the points of vantage, thus garrisoned, along this coast-line of 150 miles, Worlebury, though probably in ruins, still one of the strongest natural positions, would not be neglected.

17. Let us now turn to a narrative based entirely upon tradition, but withal so circumstantial that, in spite of the improbability of some of the particulars, and its fanciful etymology, it may really have some small foundation in fact. For it we are indebted to the same "Discourse" from which the account quoted in paragraph 12 is taken. This quaint report is here copied *in extenso*,—the reader being at liberty to accept whatever portion he may be pleased to regard as authentic. It runs thus‡:—"Their [the Danes'] 5th invasion, was at Uphill, Bledon, &c. where I have enquired of the inhabitans, whether they had, at any time, heard of any Deanes, that came, in the dayes of yore, to Steep homes near them. They told me, that the generall tradition of their Country hath beene, that a fleete of

---

23 "Irchingfield, or Archenfield, a quondam liberty, and a rural deanery in the S. of Hereford." *Imperial Gazetteer, s.v.* Irchingfield.

24 This must mean the shore of West Wales, a name then applied at least to Cornwall, if not to the whole of the country west of the Parret.

25 Deomed, Demetia, Dyfed, the south-western part of Wales.

* *A. S. Chron.*, Thorpe's transl. *anno* 915. † *Chron. Flor. Wigorn.*, *anno* 915. ‡ Pp. 475-477.

Digitized by Google

Deanes fled, to shelter themselves in the said Isle, and sometime they brake out into England, and sometimes into Wales, for sustenance; at length coming to Uphill and Bledon, etc. they fastned their ships to the shoare, left them, and marched up into the Country for booties, and that all the inhabitants fled away before them, one poor lame woman excepted, which hidd in a Rock near the ships, and when she was near spent with hunger, she was necessitated to adventure down the ships for releif: saying to herself, with the Lepers, *if they kill me, I shall but die:* but coming thither, and scearching from ship to ship, and finding no living Creature, at last espying an hatchett, took it, and with it chopped of all the Cables which ancored the ships to the shoare, and sent them to Sea, where they quickly perished. The Danes having gotten intelligence of the loss of some of their ships, speedily retreated, to save themselves and the rest, but the people of the Country, having intelligence, that all their ships were cast away, took courage, pursued them to Bledon, there fought, and destroyed them with such a bloody slaughter, as that frome thence the place took, and ever since hath kept, the name Bledon, alias Bleed-down or bloud-down, to this day. And some of them have informed me, that, when their Husbandmen plough their grounds, they find multitudes of Men's Teeth there, which being naturally the hardest bones in the body, and obdurated with chewing (in some grounds) are almost as permanent as little stones. And a Gentleman there, within 7 yeares past, having bought a peice of Moorish ground, lying at the foot of the said Bledon, when his labourers renewed the dyke filled up about it, they found great heaps of Men's skulls, and other humane bones, as entire as ever they had been." This account is epitomized by Rutter,* who attributes it to Hearne.

18. The last reference under this head is to Mr. Warre, who, in his "Exposition of the View from Cothelstone Beacon", said† :—"On that coast, near the eastern boundary of the view, the two sons of Harold landed with a body of Saxon fugitives, and raised the retainers of their father in a desperate attempt to restore the fallen fortunes of their family; and from that point sallied forth Drogo de Montacute,[26] at the head of his Norman chivalry, met them between Congresbury and Worle, scattered their forces to the four winds of heaven, and drove them back foiled and defeated to their ships."

19. After diligent search, and inquiries addressed to Dr. Freeman and other authorities on local history, the author has failed to discover the source of Mr. Warre's information as to the fight between Congresbury and Worle, and as to the interference of Drogo with any operations against the sons of Harold. All that is known about their two incursions (the first, in 1068, into Somerset; the second, in the following year, into Devon) is cited by

---

26 Drogo de Montacute was a "French thegn", whose name appears in several places in Domesday-book as a sub-tenant of small estates. Collinson (*Hist. Som.*, Vol. III, p. 311) says that he was "confidential friend and assistant of Robert Earl of Mortaigne in all his enterprises, as well as first castellain of his castle" [of Montacute].

* *Delin. N. W. Som.*, p. 84.

† *Proc. Som. Arch. Soc.*, 1854, Vol. V, part i, p. 11.

Digitized by Google

Dr. Freeman.* On the earlier occasion, the record merely is, that, after harrying the coast as they went up the Channel, and sailing up the Avon to Bristol, they assaulted that city; but, being driven off, they retreated to their ships: and then, as related in the words of an old chronicler,†—

> "Edmunde & Edwyn, Harald sonnes of Kent,
> Alle Somersetschire thei wasted & brent,
> Sir Adinoth thei slouh, & alle that thei mot hent.
> Whan thei had frauh inouh, ageyn tille Ireland went."

Other chroniclers add nothing of importance; and both the localization of the fight, and the part said to have been played in it by Drogo, are, doubtless, modern interpolations, too easily accepted by Mr. Warre. The leader of the force which met the marauders in the only fight of that period in Somerset of which there is any record, was Eadnoth, the staller, who was slain: and the result, which, according to Dr. Freeman, was a drawn battle, hardly justifies the rhetorical flourish with which Mr. Warre winds up this part of his Address.

20. That the north-western part of Somerset shared in the sufferings resulting from repeated piratical irruptions, and especially from this one, is probable; and the latter supposition may, perhaps, derive support from certain facts elicited by the Rev. J. A. Bennett, F.S.A., from a study of Domesday-book, in which he has noted the rapid fall in the values of some estates between the years 1066 and 1086;—a circumstance in which he is inclined to trace the foot-prints of the spoiler, of whose devastations no other written record may remain. Mr. Bennett thinks that, perhaps, the sons of Harold, in 1068, after leaving the Avon, may have landed at Woodspring promontory (St. Thomas' Head), "where the manors of Kewstoke, Ebdon, Worle, Bourton, Hutton and Elborough have all suffered. Brean and Burnham, and perhaps Berrow must be added to the list."‡

---

* *Norman Conquest*, Vol. IV, pp. 225-227, 243, 788-790.

† *Langtoft's Chronicle*, as rendered by Robert de Brunne: Hearne's ed., Vol. I, pp. 73, 74.

‡ *Proc. Som. Arch. Soc.*, 1879, Vol. XXV, part ii, p. 27.

Digitized by Google

CHAPTER V.

OPINIONS AND CONCLUSIONS.

OPINIONS.

1. MANY have been the opinions of antiquaries respecting the origin of Worlebury, which has been variously regarded as Firbolgic, Gaelic, Lloegrian, Belgic, British, Phœnician and Roman.

2. Professor C. C. Babington and the Rev. Hugh Prichard have been understood to favour the theory of a Firbolgic origin for works walled like Worlebury; among which they include several of the strongholds of North and South Wales. The former writer says* :—"I have myself examined the stone forts and towns in the counties of Caernarvon and Caermarthen, and think, as has been already observed, that antiquaries who have had similar opportunities will be unable to avoid the conclusion that they were raised by the same or a closely kindred race with that which built the stupendous Irish duns."

3. Mr. Barnwell and Mr. Jackson, citing Welsh tradition, held the opinion that camps of this kind were built by a Gaelic people.

4. Mr. Warre (as we have already seen)† attributed works of the Worlebury class to the Lloegrwys,—a Welsh name for the ancient inhabitants of England; which country is called Lloegr in that language. Among these, he mentions "the Hædui, a tribe of the Loegrys;"‡ and adds§ :—"it follows that we must date its [the camp's] origin before the Roman invasion, and seek for its founders among the British tribes, whether Belgæ or Hædui, who inhabited this district while Britain was as yet altogether divided from the Roman world." In the same article, however, Mr. Warre expresses a preference for a period prior to the Belgic invasion. Seyer‖ (and Rutter following him) had previously

* *Arch. Camb.*, 1858, third series, Vol. IV, p. 102. † Appendix to Chap. II, par. 2.

‡ *Proc. Som. Arch. Soc.*, 1851, Vol. II, part ii, p. 69. § *Ibid.*, p. 67. ‖ *Hist. Bristol*, Vol. I, p. 84.

Digitized by Google

attributed Worlebury to the Hædui, a tribe supposed to have preceded the Belgæ in the occupation of N.W. Somerset; but to whose existence in that district, as Seyer points out, only one topographer testifies. Unfortunately for the Hædui, it happens that this is Bertram of Copenhagen, writing under the pseudonym of "Richard of Cirencester", whose spurious attributions, until recently, have not a little confused the study of the early topography of our island.

5. Sir R. C. Hoare, and Phelps, uniformly classed the greater camps in this district as Belgic-British.

6. Sir J. Gardner Wilkinson, and others, cautiously confined themselves to the simple term, British;—understood to indicate any of the dwellers in the land before the Roman conquest.

7. In an able and interesting presidential address, at a meeting of the Somersetshire Archæological Society, at Axbridge, in the year 1869, Mr. Long, after stating his belief that Phœnician merchants frequented the Bristol-channel for the purpose of obtaining the lead produced by the Mendip mines, went on to say*:—"If this be conceded as probable, would it not be a very natural proceeding that with a view to the better working of the mines in this district, and to the greater security of their collected ore, they should establish a settlement on the neighbouring shore, and that Worle Hill should be selected as a fitting site for such a settlement? There is something so peculiar in the construction of the defences of that Camp, and so unlike what we usually see in camps of the pre-Roman period in this part of England, that it is not difficult to believe it to have been the work of foreign hands." At one time, some such idea seems to have been entertained by Mr. Warre, who noted a resemblance between the plan of Worlebury and that of Carthage, as described by Niebuhr.† Phelps, too, though, as we have seen, attributing the construction of the camp to another race, connected it "with the commercial intercourse of the Phœnician and subsequent navigators."‡

8. Lastly, Collinson, after the fashion of his day, assumed that Worlebury was a Roman camp.

9. To complete this section of the record, it remains only to cite the various views which have been held with regard to the interpretation of the 'finds'.

10. It was an early opinion of Mr. Warre that the pottery from the pits "presented no resemblance to that of British or Roman manufacture;"§ but, a little later, he had come to think "that the pottery is almost all of British manufacture, some probably Belgic, the work of the last two or three centuries before the Roman invasion."‖ He believed

* *Proc. Som. Arch. Soc.*, 1869, Vol. XV, part i, pp. 23, 24. † *Ibid.*, 1854, Vol. V, part ii, p. 32.

‡ *History of Somersetshire*, B. III. (See Bibliography.)

§ *Arch. Journ.*, 1852, Vol. IX, pp. 96, 97. ‖ *Proc. Som. Arch. Soc.*, 1853, Vol. IV, part ii, p. 124.

Digitized by Google

that "the huts now opened were neither granaries, nor tombs, nor permanent residences, but simply places of shelter in time of danger;" that the relics are of two dates, "separated from each other by an interval of several hundred years;" "that the place was destroyed by Ostorius in the reign of the Emperor Claudius;" and "deserted from the time that he took military possession of the country from the Avon to the Parret, . . . that the British inhabitants reduced to slavery by their conquerors, and having learned to construct better habitations than subterranean huts had left Worle Hill for Axium; and that their original habitations, having fallen into decay, soon became open holes, the wattle or brush-wood roofs of which, having fallen in, afforded the material of the layer of dark mould mixed with pieces of stick," which was "almost invariably found."*[1] Finally, "that at the time of the West Saxon irruption under Ceawlin, some of the Romanized Britons took refuge within these ramparts, and that the skeletons, and the iron weapons found with them, are to be referred to the desperate hand-to-hand contest which took place after the Saxons had stormed the defenders of the fortress."†

11. Mr. Jackson's conclusions, which agreed with those of Mr. Warre, are thus stated:—"Its [the camp's] construction was commenced in an age prior to all metallic implements;"‡ and "it is difficult to say who were the first builders of its mighty ramparts. Supposing them to be Celts, the lowest period to which it could reasonably be assigned, would be contemporaneous with the kingly division of the Old Testament."§ "Obviously, it is not at all likely that the pit-dwellers, whose sheltering huts were [at length] demolished, had been the original pit-diggers. Such structures as Worlebury were built to endure through centuries, and must often have been the work of generations."‖ "That a poor and obscure Celtic people were the Camp's final inhabitants at the time of its first desolation, seems certain from the remains found at the bottom of their pit-dwellings."¶ "Beneath all the" earth, loose stones and skeletons, "was invariably found another layer of loose stones and débris; and below this again, the blackened fragments of roof-tree and thatch, distinctly separating each hole into an upper and lower division." Forgetfulness of this had caused great confusion in the reading of events at Worlebury; and Mr. Warre, Dr. Tomkins, and others, always laid "emphasis on this most important local distinction." "For these decayed roofs had sheltered the more primitive occupants of Worlebury; . . . and beneath these roofs . . . were to be recovered the evidences of their . . . mode of existence. . . . Now beneath these roofs, and the layers of stones protecting them, were no human remains, save one ball-and-socket joint, pierced apparently for stringing; no arms of any kind of metal; but sling-stones in abundance." "The total absence of

---

[1] Subsequently, Mr. Warre expressed the opinion "that the roofs had been destroyed by fire." *Proc. Som. Arch. Soc.*, 1853, Vol. III, part i, p. 10.

* *Ibid.*, 1851, Vol. II, part ii, pp. 64-85; 1852, Vol. III, part i, pp. 9, 10; 1853, Vol. IV, part. ii, p. 124. † *Ibid.*, Vol. IV, p. 124.
‡ *Handb. W.S.M.*, p. 75. § *Ibid.*, pp. 99, 100. ‖ *Ibid.*, p. 82. ¶ *Ibid.*, p. 100.

Digitized by Google

other weapons, and of human skeletons, beneath the roofs negatived any supposition that the ancient place was stormed and burnt by an invader. The objects actually found were such as might have belonged to a more peaceful sort of occupiers."*[2] But there are "undeniable traces of a struggle, which must have taken place many generations, perhaps centuries, after the habitable part of the fortress had been demolished and deserted. Its huts had been long ago buried under accumulated rubbish heaps, when, somehow, Worlebury became once more the scene of active life; perhaps a shelter for the defeated; certainly the place of conflict between vigorous and well-armed men."† After remaining long desolate, "the camp had been a second time occupied by Celts. The Romanized Britons . . rushed to man the ramparts, and there was the last fight for British civilization and British liberty." This "last struggle took place probably during the sixth century of the Christian Era."‡ For, "if the weapons left were certainly Saxon, the time of Ceawlin was probable enough: Cenwalh had been named also as possible."§ Mr. Jackson says that, "coming from the east, the Saxons stormed this city on the south;"‖ and he adds this questionable assertion, (unsupported either by Mr. Warre's first-hand reports, or by the contents of the Taunton museum), that "when Mr. Warre dug inside the wall, [where the assault was supposed to have been delivered], every single foot of this ground was full of bits of iron, bone, and weapons of all kinds."¶

12. The authors of a local history thought that the skeletons discovered were those of "men of a third race who probably fell before the Roman or, it may be, Saxon prowess;" and that "the inference is clear" that "here are the marks of at least three distinct epochs in the history of the spot, epochs divided by long periods."**

13. Dr. Tomkins noticed that "the corn, the smoked surfaces of the lias fragments, and the charred wood, indicate that combustion was effected on the spot where these deposits were made, and just before the bodies were buried."

14. Mr. Tomkins, in an early lecture, remarked, "that so much ingenuity and skill should be shown at Worlebury by builders who used no cutting tool and no mortar, is no argument of late, but rather perhaps of early, date."†† "The relics found in the lower part of the pits indicate a barbarism untouched by the hand of Rome." "Such a state of things would quite agree with the supposition that the pits were last used for habitation

---

[2] Elsewhere, Mr. Jackson expresses a different opinion. He says:—"Whether the Cymry burnt the roofs of the Gael, or the Romans the roofs of the Cymry, they could not decide." *Lecture*, 1860.

As to whether the roofs were, or were not, burned, he says that "Mr. Warre's opinion had varied. The point in favour of burning was that one heap of corn was more blackened at top than within." *Lecture*, 1871.

* *Lecture*, 1871. † *Handb. W.S.M.*, p. 89.

‡ *Lecture*, 1860. § *Lecture*, 1871. ‖ *Lecture*, 1860. ¶ *Ibid.*

** *Bristol Past and Present*, by J. F. Nicholls, F.S.A., and John Taylor, Vol. I, pp. 9-11. †† *Bath Lecture*, p. 13.

Digitized by Google

when Ostorius Scapula conquered this part of England."* "Mr. Warre referred the last occupation of the pits as dwellings to this time, but his theory was that the onslaught . . was made by Ceawlin, the Saxon, in the year 577, that is, that five centuries and a quarter had passed between the time when the stores of grain and other possessions of the pre-Roman Britons had been deposited in the pits, and the day that added to the contents of the same pits the skeletons and the iron weapons by which they were slain. I never could see good reason for this opinion at the time, nor can I now."†

15. The most recent statement of his conclusions has been given in the following words:—"He [Mr. Tomkins] believes that the pits are probably coæval with the original construction of the ramparts, and were in the centre of huts or wigwams. That the grain of two kinds, and pulse, found stored so carefully, were preserved as seed for the next harvest; and that the iron hollow cone was very probably a plough-share of the form even now used in the east. That the stores and pottery and other relics found at the bottom of the pits belonged to the men whose skeletons . . lay in some cases in contact with the rock-floor, and in others immediately above other skeletons, or separated from the stores only by a quantity of 'black mould', composed mostly of burnt wood and twigs, the material of the huts which had fallen in while burning.[3] In other cases more or less of rubble and stones had probably been cast in to extinguish the fire, and on this the slain or struggling warriors had been thrown, and their bodies covered in with loose stone and earth. An assault on the burning village, or assemblage of huts, in the stronghold would account for all this. That a Roman attack on British barbarians seems more probable than a Saxon attack on Romanized Britons, since, as Mr. Warre has emphatically remarked, no Roman remains were found in the pits."‡

16. The Descriptive Index to Plate XI embraces a detailed report by Professor Macalister on crania and fragments of bones found by Mr. Warre and his colleagues in 1851, 2; also on the scattered bones picked up by the author in 1881.

17. Prof. Macalister thus summed up his conclusions:—"The series of crania and fragments of bones which I have examined consist of representatives of one type of skull,—dolichocephalic,—fairly 'well-filled'; with strong brow-ridges; a deeply hollowed ophryon; a narrow, low forehead; the occiput tending to a capsular projection; and the jaws moderately strong, with widely roomy alveolar arches. None of them have any approach to the true cymbocephalic shape which Thurnam regarded as characteristic of one, at least, of the races of early man: nor is there any tendency to undue union in the sutures: but

3 "That a sufficient quantity of wood was burnt to produce intense heat was apparent from the fact that the sides of the pits were in many cases calcined on the surface, [as had previously been noticed by Mr. Bloxam], and that many pieces of stone found among the charcoal were burnt to lime. That the burning material fell in is clear from the fact that the stores of corn were burnt from above, the highest portion being most completely reduced to charcoal." *Worlebury*, 1st ed., p. 76.

* *Ibid.*, p. 14. † *Ibid.*, p. 15. ‡ *Worlebury*, 1st ed., p. 77.

Digitized by Google

in many other particulars the skulls agree with some of the dolichotaphic skulls in the Cambridge Museum. The men were of strong, muscular build, from 5 ft. 3 ins. to 5 ft. 10 ins. in height. Probably, however, the last was an exceptional case. They therefore belonged to the so-called Iberian type."

18. The following additional notes on the historical import of these human remains were written in response to a request for a farther expression of his opinion on this important branch of the inquiry. "The skulls are certainly not those of a Celtic or Gaidheilic [Gaelic] people;—by which I mean the tall brachycephali, whose remains first appear in company with bronze weapons, and whose descendants are still recognizable as the 'fair Celts'. They closely resemble, in all particulars, the skulls of the race whom it is the fashion now to call 'Iberians';—the dark race which still survives, here and there, in our own Western Islands, and in the west and north-west of Ireland; and which has become mixed in many places in Wales with the aryan Gwyddel: and I have no hesitation in referring them to that race. That any direct conclusion, as to date, follows from the identification, is a separate question: for these 'dark Celts' (as they are sometimes improperly called) certainly fought against the Romans, side by side with their brachycephalous contemporaries: and among the heterogeneous jumble of skulls, to which—for want of a better—the name 'Romano-British' has been applied, some certainly show characteristics identical with these."

CONCLUSIONS.

19. In the total absence of written records,—in a silence unbroken even by the faintest tradition,—the antiquary who seeks a solution of these problems has nothing to guide him but a few data,—some taken as trustworthy, others problematical,—which may be differently interpreted as they are differently viewed. It need, then, be no matter for surprise that opinions have widely varied: the more so that, hitherto, they have been formed upon an incomplete acquaintance with these data (sometimes conflicting) which are now brought together for a farther study of the subject. Nor, even with this additional aid, does it seem possible to do more than to arrive at certain provisional conclusions,—positive or negative,—on which it would be unbecoming to insist too confidently.

20. The queries to be answered are these:—

1. At what period was the camp constructed? To what people should it be attributed?
2. Were the pits coæval with the walls?
3. What were the circumstances of the final assault?
4. Is the occurrence of two such events, or of one only, indicated?
5. If the latter, can that event be historically placed?

21. *The date and origin of the camp.*—The general principles which should guide an inquiry into this question, turning upon the indications furnished by structural characteristics,

Digitized by Google

are set forth in the introductory chapter, in which a rule is laid down that "the only points in the arrangement or construction of a camp which can be regarded as bearing any special ethnic significance are such as form distinct peculiarities not explicable by the conditions of the site." Has Worlebury any such peculiarities? There are but three. One of them consists in the compound and terraced structure of its extremely thick walls; another, in the fact that no tool-marks are visible; the third, in the occurrence of rock-pits in the area.

22. Until lately, so far as was known, the first-named feature appeared to differentiate this from every other camp in Britain: for it had not been ascertained whether the terracing (of which a few examples had been observed in North Wales) was merely a superficial feature, or (as seemed very probable) an indication that the walls were compound.[4] But it has now been discovered that portions of the ramparts of several of the Welsh strongholds were built after the Worlebury manner.* We have seen, too, that some of the Irish "dúns", though differing totally from Worlebury in almost every other particular,—being castles rather than camps,—have this feature in common with it.[5] That none of these structures bear any tool-marks, does not prove that those who raised them were unacquainted with the use of metallic tools. It may be assumed that, in many such cases, it was not needful to dress the stones. As to the pits:—there is nothing of the kind in the Irish forts, whose comparatively comfortable "cloghauns" indicate a mode of living in advance of anything that could be furnished by the rude appointments of the Somerset camp.

23. Those who have favoured the theory of a Firbolgic origin of the above-mentioned British camps, appear to have been led to it solely by observing the external similitude between their terracing and that of the far-removed Irish examples.[6] Had they known that the structural analogy was still closer, they would probably have thought their theory firmly established. But when due regard is had to the marked differences between the two in other points, and to the absence of proof that the Firbolgs were ever in southern Britain, it will be evident that much more is required to establish even a strong presumption that Worlebury is Firbolgic work; and it seems safest to suppose that the common preference for one structural peculiarity may be otherwise accounted for.

---

4 Moel-y-gaer, in Denbighshire, can hardly be regarded as an exception. A short length of the *agger* was examined in 1849 by Mr. W. Wynn Ffoulkes. From his very short description and sketch, it may be gathered that a core, composed of "a quantity of stone roughly laid together, forming a sort of wall," is faced with banks of gravelly clay. On the top of one of these (probably the inner one) rests a shallow layer of stones, level with the present crest of the central wall, from which, probably, they have fallen. *Arch. Camb.*, 1850, new series, Vol. I, p. 177.

5 If the Irish annals are to be trusted, these were built by Firbolgs, a somewhat mysterious people, of most uncertain identification.

6 That there are no known intermediate examples of the same method of building, is not, by itself, a fatal objection to the theory; because the *hiatus* might be accounted for by a dearth of material between the extreme points; or by assuming that the builders of Worlebury and the Welsh camps, instead of merely crossing the Channel, sailed at once for the Atlantic coast.

* See Appendix to Chap. II, par. 52.

Digitized by Google

24. The advocates of a Gaelic origin of camps of this type rest their opinion upon Welsh tradition, and upon the existence of a striking likeness between many of those which were raised in the rocky regions of western Britain, which, it is held, were occupied by Gaelic tribes at or before the dawn of our national history; being far less common, if not entirely absent, in areas peopled by other tribes. Regarded from the point of view afforded by these considerations, this theory seems to be so far unobjectionable: for there is a sufficiently near parallelism between Worlebury and many of the stone-built Welsh camps, in all important points: and, in both cases, they occupy soil that at one time was Gaelic.

25. That compound walls were sometimes reared alike by Gaels and Firbolgs, may possibly be explained by supposing an early intercourse between the two peoples: but it may quite as reasonably be regarded as a primitive form of buttressing according to an idea independently developed in each case. The pyramid of Saccara, in Egypt, was built precisely after the same manner; but it would not, on that account, be called Firbolgic.

26. Dismissing the fictitious Hædui, it must here suffice to say that those who attributed Worlebury to the Belgæ left it to be concluded that their conjecture rested on nothing more than the fact that, in the earliest historic times, the camp was in Belgic territory: for, so far as appears, there was no distinctively Belgic manner of castrametation.

27. If the forms of Worlebury indicate Phœnician influence, it follows that it must be indicated also by our analogues in North and South Wales, Cornwall and West Ireland. Except by Aylett Sammes,* Sir William Betham,† and others of that school, whose theories have not found acceptance among our best scholars,[7] there appears to have been no attempt to trace this influence into those regions; except in the case of Cornwall, and, perhaps, in that of Venedotia, an ancient name for a part of North Wales bordering on Cardigan-bay, and, curiously enough, in the very neighbourhood of some of the best camps of the kind in question. As to the indications afforded by the circumstance of position, the author is hardly prepared to agree with Mr. Long, even in his cautious estimate of their value. It must not be forgotten that Worle-hill is very much isolated; and, anciently, approach to it could never have been unrestricted. Moreover, from the great distance to which the tide retreats, the bays on either flank of the hill would not have furnished ports so ready of access and so sheltered as was that in the mouth of the Axe. Besides:—the natural route connecting the Mendip mines with the coast would be by the British (afterward the Roman)

---

7 Professor Rhys holds that "there is not a scrap of evidence, linguistic or other, of the presence of Phœnicians in Britain at any time. . . Had there been Carthaginian commerce with the tin-districts of West Britain, it would probably have been continued by the Veneti, in whose hands the trade with this country was in Cæsar's time." (*Celtic Britain*, p. 47.) Mr. T. Wright says:—"I look upon the modern myth of the colonization of this island by the Phœnicians as . . based upon speculations which have no historical foundation." *The Celt, the Roman and the Saxon*, 3rd ed., 1875, p. 22.

* *Britannia Antiqua Illustrata*, 1676. † *The Gael and the Cymbri*, 1836.

Digitized by Google

way along the hills to Bleadon or Uphill. Worlebury is quite off that line; and, if a strong place were needed to protect the stores, or the shipping, surely it would have been established near the terminus of the road. Dolbury, also, which Mr. Long put to the same use, is not upon the route; nor has it the advantage of being near either end of it. But it has yet to be shown that the mineral traffic needed such protection. Probably foreigners came here merely as merchants, bent upon barter,—not as settlers; and would incur no responsibility for the land-transport, which, in pre-Roman times, we may suppose, was in the hands of the natives, whose forts would be destined to protect them from external foes rather than from internal robberies. Hence, without stronger evidence in support of it, the theory of a Phœnician origin of Worlebury seems to be an improbable one.

28. Let us now see whether it may not be possible to reduce the sources of uncertainty by taking a wider view than that which is limited to a comparison of peculiarities of plan and structure;—in short, by considering everything else that may throw any light—dim though it may sometimes be—upon this puzzling problem. If, after all, it should prove impossible to arrive at a conclusion so positive in all points as to commend itself to general acceptance, the endeavour will not have been altogether fruitless if it should indicate the directions in which a solution is not likely to be found.

29. To this end, in the first place, we ought to start with a clear idea of the limits within which inquiry may profitably range. The conditions under which Worlebury could be constructed were such as could exist only during certain stages of human progress. In early ages the establishment of a safe retreat for times of danger implied a state of society in process of settlement. A few hunters, sparsely scattered over the country, subsisting solely on the spoils of the chase, being more or less continually on the move, and having nothing to defend but their persons and personal belongings, would have neither time to build, nor need to occupy, a stronghold. It is not until the pastoral stage is reached,—when property begins to accumulate, animals are domesticated, and flocks and herds become sources of sustenance and wealth to their owners, while the predatory instincts are still active, and nothing is safe unless guarded from attack,—that man is impelled to provide places of security where, when threatened, he may shelter himself and his goods until the emergency be overpast. Under ordinary circumstances, such a retreat would be of a simple character, like the Irish "raths", which have been used for this purpose down to times comparatively recent. It is, however, not always needful, or even possible, to do this; for, in countries where periodical migration in search of fresh grazing-ground is necessary, life becomes nomadic; and defence must be directed against attacks in the open. But in our islands, the pastoral life generally implied settlement in one spot, with a growing devotion to agriculture.[8]

---

[8] Schoolcraft estimates that, in a population which lives solely upon the produce of the chase, (in North America), each hunter requires, on an average, 50,000 acres, or 78 square miles, for his support. (*Indian Tribes*, Vol. I, p. 433.) In Hudson's Bay territory, there is about one inhabitant to every 10 square miles.

"A Tartar family, in Central Asia, requires 300 head of cattle, and occupies rather more than 2,000 acres." (*The Origin of the Aryans*, p. 50.) Another account apportions 17 head of cattle and 333 sheep, besides a great number of horses and camels, to a family,

Digitized by Google

The period of barbaric camp-building[9] must have commenced during this stage; developing as the tribes became more powerful; and ceasing only when these were brought into subjection to a central government. When, in course of time, the cultivation of the fields became the chief occupation of life, when land was made a subject of legislation, and the population settled in homesteads and villages, or gathered into towns for the pursuit of handicrafts and commerce, the old camps became obsolete,—save when occasionally resorted-to as rallying points in times of invasion or of civil commotion.[10]

30. It will generally be conceded that Worlebury must be attributed to one of the races in occupation before the Roman conquest of North Somerset. As nearly as our present ignorance allows us provisionally to generalize, these were:—(1) The Ivernians, (otherwise called Iberians), the earliest dwellers in these islands of whom we have any historical or traditional knowledge; commonly regarded as having been a neolithic people,

---

consisting of 10 persons, which probably includes servants and slaves. Most estimates reckon 5 persons to each of these families; but this may be too little for a nomadic people. Where pastures are perennial, as in Britain, the necessary acreage might be halved; giving about 3 acres to every head of cattle; while an acre will feed 4 sheep. In modern farming one person is required properly to tend from 20 to 30 cows.

Man rapidly multiplies with increased means of living. Mr. R. N. Worth has calculated that the population of Devon, with an area of 2,586 square miles, which, in the hunters' age, could not have exceeded a few hundreds, had, in the 8th century, risen to nearly 10,000 (3·87 persons per mile); and, at the time of the Domesday survey, to about 35,000 (13·5 persons per mile). (*Prehistoric Devon*, p. 16.) The proportionate numbers for Somerset, with an area of 1,645 square miles, would respectively be 6,363 and 22,270. Whether, in the later prehistoric times, the number was greater or less than the former of these, must be a matter of conjecture: but, that it may have been greater, seems not improbable: for that number collected into the 50, or more, camps and ancient villages scattered over the county, would give only 125 inhabitants, or 25 families, to each. It is easy to suppose that the population of the district may thus have dwindled: for, in Basuto-land,—where the mode of life is probably very similar to that led by the people of North Somerset at the period in question,—the natives being herdsmen, who also industriously till the ground, number 21 to the square mile.

The life-conditions of the numerous tribes in Britain and Ireland differed so greatly in early times, that we cannot always know what they were in any particular district at a given period. The discrepancies between the statements of the classical writers on this subject can best be accounted for by assuming that, when they wrote, the natives were in various stages of progress, ranging from cannibal savagery to a very considerable barbaric civilization. Cæsar's observation that the Island was very populous, ("*hominum est infinita multitudo creberrimaque ædificia*"), was, no doubt, true for the commercial and agricultural tribes inhabiting the parts of Britain with which he was personally acquainted; and also, in a less degree, for the channel sea-board, down to the extremity of Cornwall: but, unless the means of sustenance were much greater, in the inland districts, than those furnished by other purely pastoral countries, it could not be true for regions where (as we are told) the inhabitants grew no grain; subsisting solely on flesh and milk;—to which, no doubt, would be added wild fruits, roots, nuts, acorns, and other edible products of the woods. It must not be forgotten, too, how much of the country was covered with forests, thickets and marshes, which are frequently mentioned in the accounts of the Roman conquest. But, even with these drawbacks, it seems probable that the frugal habits of the hardy Britons enabled a larger number of them to subsist on a given area than would be indicated by some of the examples which have been cited. The practice of agriculture adds—and may add enormously—to the capability of land for human support. Before it can be possible to make a trustworthy estimate of the probable population of a particular division of the country at any given time, it is necessary to know what areas were then available for pasturage and for tillage; and the extent to which these were profitably occupied.

9 It is probable that most of the prehistoric "camps" were really fenced towns or villages, regularly occupied—at least during the inclement season of the year. Men were not the only foes to be feared: for wolves, boars, and perhaps bears, were abroad.

10 The Saxons were not camp-builders; and the 'fastnesses' of the Danes were usually no more than extemporized, and probably stockaded, earthworks.

Digitized by Google

ignorant of agriculture;[11] whose residence is attested by their characteristic sepulchres,—the long barrows at Stony Littleton and Nempnett, in Somerset, and at Uley, in Gloucestershire: (2) The Goidels, or Gaels, who, it is believed, subdued and absorbed the Ivernians, and, in their turn, were dispossessed and perhaps partially displaced by the Belgæ; but of whom we know nothing save that they left behind them, as evidences of their presence, a few local river-names: (3) the Belgæ, the time of whose arrival in Britain was probably between 500 and 400 B.C.;[12] whose occupation of North and East Somerset in Roman times is implied by Ptolemy, who names Bath and Ilchester as two of their three chief towns. Though it may have been relatively late, when they reached the western extremity of their conquered territory, they must have retained possession of this part of it long enough to attach durable names to certain centres of population and topographical features, which still retain traces of their Cymric origin.[13] (4) It is hypothetically possible to add a people from over the water, who may have needed a strong post to secure a footing upon this, to them, stranger-shore. There is ground for believing that such descents were not uncommon; and, though of unknown value, they should be taken into account in estimating the conditions which may have led to the fortification of Worle-hill.

31. One thing is indisputable: Worlebury was no improvised shelter, thrown up on the occurrence of some transient danger. Such a work must have been intended to be of permanent use.[14] Capable of accommodating a large number of people;* and needing a

---

11 If unacquainted with metals, they could not have practised anything that could properly be called agriculture. Professor Boyd Dawkins, however, says that they "brought with them into Britain [not only] the domestic animals, [but also] the cultivated plants and seeds; and laid the foundation of our present culture." (*Early Man in Britain*, p. 496.) No doubt, in process of time, they advanced to a higher stage—some faster than others.

12 It has been held that Britain was indebted to the Belgæ for the introduction of bronze: but this can hardly have been the case; for our best authorities place the beginning of the bronze period in Britain between 1400 and 1200 B.C.; and attribute its introduction to Phœnician traders.

13 To mention only a few of these place-names:—Axe, Brue and Severn are from the Gaelic: and that the district was once in the possession of a people speaking a Cymraic language, we are reminded whenever we cross one of the 'rhines' which intersect the levels. *Rhin* (pronounced *hreen*) is Welsh for trench. Brean-down may perhaps be *bryn dwn* (pronounced *brin doon*), dusky hill. No derivation has yet been found for *Worle*. Mr. Jackson gave reasons for thinking that, formerly, it was a word of two syllables. This is corroborated by a passage in Norden's *Description of Middlesex*, MS., 1592, in which, writing of a "copper and brasse myll," near "Istleworth, a place scituate upon the Thamise," he says:—"The oar, or earth wherof it is contryved, is browght out of Somersetshire from Mendipp, the most from a place called Worley Hill. The carriage is by wayne, which cannot but be very chardgeable." *Bury*, of course, is the fort upon high ground,—a stronghold. In passing, it may be noted that, *pace* Mr. Warre, some weight should be allowed to the claims of Saint Kew, as against *cwch* (pronounced *kooch*, not *kewch*, as Mr. Warre has it), a boat.

14 Exaggerated ideas have been held as to the amount of labour involved in building and intrenching Worlebury:—centuries, even, having been named as a possible period during which the undertaking may have been in progress. To put this matter on a firm basis, the author has taken out the quantities, and estimated the time that would be required to accomplish the task,—the following conditions being pre-supposed: *viz.*, that the builders were acquainted with the use of primitive metallic tools; that three-fourths of the stone for walls and breastworks was collected from the surface of the hill, within a reasonable distance,—the remainder being got out of the ditches; that horses and sledges were used for transporting the materials; and that the work was carried on from day to day during the usual hours of labour. After making a liberal allowance for the comparative rudeness of barbaric appliances, the result of the calculation is, that the walls of Worlebury could have been built, and the pits and ditches dug by 250 men in 9 months. If the task were undertaken by a people without metallic tools, a large and uncertain addition would have to be made for trench- and pit-work, which might possibly consume a year or two more.

* See Chapter II, par. 71.

Digitized by Google

garrison of not less than 800 men,—if only to line the innermost rampart with a single rank, and to guard the passages through the cliffs,—it must at least have belonged to some local tribe, numerous enough to man it, when necessary; but, perhaps, with only a few of its families dwelling on the hill and its fringes. Had it been posted in the heart of a district of great natural resources, or at a strong strategic point, its use would have been no mystery: but secluded, as it was, by marshy levels,[15] and assailable from the sea, its origin and purpose are not so easily discerned. It is true that the exposure of the place was compensated by the strength of the works: but the recognition of this brings us no nearer to our goal, if we fail to discover why the position was fortified—formed by nature, though it was, for such a purpose. Only four suppositions seem to present themselves:—(1) that Worlebury was designed to be a last rallying point in the event of an enforced retreat from the interior; (2) that it was established by the people of those parts to protect their territory against apprehended attacks from without; (3) that it was built by invaders and settlers from over the water, who had not only possessed themselves of the sea-board, but were also in occupation of a good deal of the more valuable *hinterland;* (4) that, if the work of a commercial people, native or foreign, it was needed to secure the safety of a trading port. The first supposition involves this practical difficulty:—that the resistance of a remnant thus driven to bay, and cooped up, with their cattle, on a barren headland, must be too brief to be worth the cost of such a means of temporary shelter. Nevertheless, in view of ancient expedients, it cannot be said to be an impossible hypothesis.[16] With regard to the second:—sea-comers had choice of many other suitable places for landing, which were either not at all or much less strongly defended. And yet (though a slighter work might have sufficed for that purpose; seeing how little land in its vicinity there was to defend) there may have been some intention of providing against this contingency: for Worlebury was fortified on that side as well as toward the land. As to the third supposition, we have seen that there are records of such incursions, settlements and fortifications in the West of England in the 4th century A.D.:* and it is not unlikely that these were preceded by similar movements in those parts of Britain in prehistoric times.

---

15 The author has advanced reasons for believing that these levels were embanked in pre-Roman times. (*Proc. Som. Arch. Soc.*, 1880, Vol. XXVI, art. on The Abbot's Way.) Embankment from the sea implies the provision of means for a certain amount of arterial drainage, with regulating apparatus, to prevent the inclosed land from being flooded. Such early hydraulic works need not be thought incredible. Mr. R. N. Worth has asserted that "there was reclamation from the sea in Kent, long before the Romans came." (*Roman Devon*, p. 39.) This is a matter of importance in connexion with the present inquiry; bearing largely, as it does, on the local relation of population to the soil in very early times. But the Somerset levels were still very wet in the Middle Ages.

16 The ancients often did execute defensive works entailing an expenditure, as we should think, out of all proportion to their utility, or to the interests to be conserved, which might, much more readily, have been sufficiently safeguarded. This is the more remarkable, in that, among barbarians, there was no such thing as a regular siege. Their custom was to deliver a rapid assault: and, to provide against such attacks, prudence dictates a severe restriction in the length of the lines, to bring them within the limits prescribed by the number of the defenders. But every such case should be judged upon its own merits.

* Chapter IV, pars. 6, 7.

Digitized by Google

The fourth, and last, has this to recommend it:—that, whereas stock-keeping and husbandry alone would support only a very small local population,—far too few to require or to utilize such a stronghold,[17]—commerce would open the door to an almost limitless increase of residents on the spot.

32. To compare Worlebury with other fenced places upon promontories, is to find that, for the most part, they differ from it so much as greatly to limit their utility as cases in point. For example, the rude and slightly fortified 'cliff-castles' of Wales and West Cornwall[18] were as well suited to be holds of buccaneers as to be places of refuge for the inhabitants. The "Firbolgic" forts in the Aran-isles and on Dingle-promontory, like the former in situation, though totally different in structure, were probably the impregnable castles of local chieftains and their principal retainers. Neither of these classes of works can be placed in the same category with Worlebury. For the nearest analogues we must take Dinas-penmaen, or Braich-y-ddinas, on Penmaenmawr,* or cross the Channel into Brittany, where, Cæsar says,† the Veneti were accustomed to place their maritime towns upon promontories. Such a town was Ar Chastel-coz.‡ The strength of these positions, and their convenience for a sea-faring people, are obvious,—especially when they had easy and secure communication with grazing and arable land in-shore, from whence they might readily draw supplies of food.

33. On a review of all the leading facts and arguments brought together in these pages,§ it becomes manifest that we have not yet—possibly we never shall have—the materials for forming a positive opinion upon the extremely puzzling questions:—Who were the builders of Worlebury? and How far back in the long prehistoric ages must we place its foundation? Turn our inquiring gaze in what direction soever we may, we are confronted with difficulties: and the most that it is possible at present to do is to seek a reconciliation between those that are not quite intractable; and so to incline toward such conclusions as seem to involve the fewest and least pressing objections.

For us, the various peoples who came and went, like shadows, in those far-away times are, too often, little more than so many names—shifting, too, and intangible; because, in

---

[17] The area of habitable land above the levels is 3 square miles, or 1920 acres. Note 8 furnishes data for estimating the capacity of the hill to support a primitive uncommercial population.

[18] *E.g.*, Porth-dinllaen headland, Caernarvonshire; St. David's Head, Pembrokeshire (*Arch. Cambr.*, 1899, fifth series, Vol. XVI); Treryn-dinas (Gurnard's-head) and Treryn-dinas (Logan-rock), Cornwall.

* See Appendix to Chap. II, pars. 12, 23, 49, 51a.

† *De Bell. Gall.*, Lib. III, c. 12, 13.

‡ See Appendix to Chap. II, pars. 18, 27, 39, 40, 41, 42, 49, 51b; also Appendix to Chap. III, par. 9.

§ In connexion with this, consult particularly the following passages, which supply the groundwork of the argument:—Ch. I, 3, 5, 6, 8, 9, 10, 16, 20; Ch. II, 1, 23, 71; Append., 2, 3, 4, 6, 7, 11, 16, 17, 18, 39, 40, 41, 52; Ch. IV, 6, 7; Ch. V, 2, 3, 4, 5, 6, 7, 11, 14, 17, 18, 19, 21 22 (and note 5), 23, 24, 25, 26, 27 (and note 7), 29 (and notes 8, 9, 10), 30 (and notes 11, 13), 31 (and notes 15, 16), 32, 34 (and notes 19, 22, 25).

Digitized by Google

the mouth of tradition, as in the pages of history, the same name is sometimes given to different races, and different names to the same race; because, also, their many migrations, settlements and alliances must often have resulted in a fusion of blood which would greatly modify the stocks, intermingling their distinguishing traits, and complicating the problem of their identification; and, again, because identity of speech by no means always connotes identity of race. Of the character and mode of life of any of those early peoples we can form but an uncertain conception;—and that based chiefly upon a reference to modern survivals of somewhat similar conditions. But we have to be content with such helps as are at hand; following any clue, however slender, that may promise to guide us through the mazes of the labyrinth.

First, then: the size and strength of Worlebury bespeak it a stronghold of a numerous and powerful tribe, or clan, in secure possession of that part of the country. *Second:* to have attained to such a status, they must have had greater resources than could have been furnished by a merely pastoral and agricultural life: in short, to a certain extent, they must have been engaged in trade or commerce.[19] That the latter is probable, is indicated by the position and character of the fortress-town;—otherwise, not easily explicable. *Third:* that its builders were natives rather than foreigners, is a supposition most consistent with the fact that, in inland parts of Wales, there are camps with the same distinguishing characteristics. Such works are attributed by tradition to a Goidelic people: and, as there is good reason for believing that people of the same stock were once in possession of North Somerset, it is credible that these should have executed a work so peculiar in that part of the country; but, in many ways, the counterpart of its Welsh analogues.

There are but four claimants in the field:—the Belgæ, the Firbolgs, the Ivernians, and the Goidels. As the only title of the Belgæ is derived from the circumstance that Worlebury happens to be within territory which was once their own, they may perhaps be withdrawn from the list. The Firbolgs seem to be too legendary and too far removed to remain as a factor in the problem: though their claim has received the support of able advocates emphasizing a single parallelism between works otherwise very dissimilar. The choice really seems to lie between the Ivernians and the Goidels; supposed to have successively occupied the district in question. If Worlebury had been a single example of its type; and if there were reasons for believing that local Ivernians, before they had

---

19 Nothing is known of any local traffic, except in the metallic produce of the Mendip mines, which, of course, could not have been worked before the age of metals. There was an ancient trade between Gaul, Spain and South Britain,—the continental ports being, one near the mouths of the Rhine, and others within those of the Seine, the Loire and the Garonne; to which must be added the harbours of Brittany and the Phœnician port of Cadiz. The two first-mentioned, no doubt, were in communication with the eastern portions of our coast,—especially Kent; and the remaining ones with the western portions,—especially Cornwall, whose inhabitants, from intercourse with strangers, were comparatively civilized. Tin, dug from mines, was the chief commodity thence exported. The traffic was extremely ancient; for geologists assure us that tin-streaming was carried on at Carnon and Pentewan "at a time when the mammoth either still existed there, or had not long disappeared; and when the general level of Devon and Cornwall was at the least 30 feet higher than it is now. Within the historic period, no such change has taken place." *Prehistoric Devon*, by R. N. Worth, F.G.S., p. 20.

Digitized by Google

passed under the power of the Goidels, had so advanced beyond the neolithic stage as to find the need of such a stronghold, and to be capable of turning it to good account, there might be nothing to be urged against the conjecture that they were its founders. But as we are absolutely in the dark with respect to these matters, there is a total lack of positive evidence in support of such a theory; and the balance of probability rests with the Goidels; partly because, if they came later, they were more likely to be equal to the task; but chiefly because tradition credits them with works of the same type in districts of Wales of which tribes of the same race were once in possession.

Of one thing, I think, we may feel assured:—that, whatever people built Worlebury, succeeding pre-Roman occupiers would find it equally adapted to their own purposes.

As to the probable date of the work, it is idle to speculate. Even if we knew who were its builders, we might look in vain for anything to tell us when it was built: but, for anything that appears to the contrary, it need not necessarily have been many centuries before the Roman conquest. See *supra*, 30.

34. *The date of the pits.* From their very nature, the pits cannot carry any indications of date. Such excavations have been made and used from very early times, even to the present; and in parts of the world widely separated. In this case, there is nothing to be said against the assumption that they are of the same age as the walls and ditches. Had they been yet more ancient, it is probable that they would have been scattered over the flatter slopes of the hill, as well as on its top; and that the subsequently laid out lines of defence would have passed through, or awkwardly close to, some of the groups. But the pits are strictly confined to the *enceinte;* and are so placed as to indicate clearly that they were intended to be a part of the fortress. That one of them was dug in the bed of the cross-trench, does not prove that the group, as a whole, was an after-thought.

35. *The closing scene.* Viewed simply as an event, apart from the question of date, the final acts appear to have been these:—An attack was made upon the place, which contained men, women and young people, whose stores of food were kept in the pits sheltered by wattled roofs. A successful assault was delivered; and the defenders were driven out or slain,—some by flesh-wounds with spears, others by cuts with sharp swords. The roofs were fired; and the blazing masses fell into the pits, partly charring the corn which lay at the bottom. Some of the corpses were unceremoniously flung in, either soon after death, while yet pliant, or after a sufficient time had elapsed to allow the *rigor mortis* to pass away, so that the limbs might be flexed, to pack them into the restricted space afforded by one, at least, of the pits. Others may have been left a prey to the wolves. Then the ring-walls, or banks, in which the roof-poles were set, were cast into the pits; and, finally, the walls of the fortress were dismantled and the ditches filled with the *débris.*[20] It is reasonable to

[20] For the most part, the few animal-bones that were found during the recent exploration occurred rather deep in the ruins. There are two ways of accounting for this, by supposing:—(1) that the works had been partially dilapidated before the time of the attack;

Digitized by Google

suppose that the skeletons discovered were those of some of the besieged who fell in the fight.

36. *Was there an earlier crisis?* The arguments of those who have favoured an affirmative reply have been cited in paragraphs 10 and 11 *supra*. So far as Mr. Warre's scanty memoranda afford information about them, the relics found in or just above the bottoms of the pits were these:—poor corn (wheat and barley), pulse, bones of various animals (including birds), the skull of a pig, coarse pottery, lias covers, chipped flints, pieces of spar, sling-stones, spalls, pieces of ochreous earth, a large iron spear-head, two thick iron rings, part of a small bronze ring, sedge or fibre matting, black mould and charred wood. Now the occurrence of an iron spear-head near the bottom of a pit, under other things of as early a character as any that were found; the iron rings on the rock-floor, and the bronze one just above it, associated with similar accompaniments;—to say nothing of evidence that, possibly, might have been furnished by some of the unlocated finds recorded in the third chapter;—seem sufficient to link the lower deposits, in point of time, with the upper ones: and it appears to the author (as it does to Mr. Tomkins, whose remarks on the subject are quoted in paragraph 14 *supra*) that there is no reason for postulating a double event; and that all the facts can be reconciled with the conclusion that the contents of the pits give evidence of no more than one overthrow.

37. *The date of the attack.* Reserving, for the present, the testimony of the 'finds', let us take a rapid glance at historical probabilities. The possible combatants, generalized, and taken in order of time, may be grouped in this manner:—

Ivernian *v.* Goidel	Belgic-Brython *v.* Roman	Roman-Briton *v.* Saxon	Saxon *v.* Dane
Goidel *v.* Brython	Roman-Briton *v.* Pict-Scot	Saxon *v.* Northman	Dane-Saxon *v.* Norman

38. If it be true that the defences were deliberately destroyed,*—that act affords ground for conjecturing within what limits of time the overthrow must have been effected. Surely (as noted above, under another heading) a prehistoric fortress, erected with so much labour and skill, and adapted to the habits of warfare of each and all of the races preceding the Romans in the occupation of the country, if taken by any one of them from its former tenants, would not be destroyed, but preserved and repaired. This leads to a conviction that the final assault and ruin are not likely to have come before the advent of the Romans, who would find the Belgæ in possession of the place. As it could not conveniently be accommodated to the Roman manner of encampment; as there is no indication that it was

---

that these bones had been thrown over the walls upon the fallen stones, and became covered with a greater depth of them when the defences were completely destroyed: (2) that the bones lay scattered on the ramparts at the time of the attack; and thus mingled with the material of the upper works, which would be the first to be thrown down. Of the two alternatives, the second is the simpler, and, for that reason, the more probable. As these remains are not necessarily of a date later than that of the pit-deposits, they give no indication that the ruin was a work of after-times.

* See Chap. II, par. 43.

Digitized by Google

so used;[21] and as its position may not have been sufficiently inland, or near enough to one of the great roads, to make it of strategic value to them, it is not unreasonable to suppose that they would wish to raze such a barbaric stronghold, lest it should become a focus of rebellion. Indeed, it is almost inconceivable that they should have left the defences of such a place intact.

39. If, shortly after the departure of the Romans, the Picts and Scots carried their destructive forays so far southward, (which is doubtful), their movements must have been too rapid, and their lust for plunder too thoroughly satiated by the sack of cities, farms and mansions, to have allowed them to be tempted by a barren assault on an ancient camp,—even supposing that this were still in a state of integrity.

40. The same may be said of an hypothetical attack by Northmen upon the Saxon inhabitants, who were more given to dwelling in lowland villages and homesteads than to occupying strong places, which, in their slow march of encroachment and appropriation, they left to the native Wealas, whom they partially dispossessed and chased into the hills.

41. In consonance with this last-mentioned practice, is the theory, which has found favour with some,—that of a Saxon assault on a Romano-British garrison, driven to bay. It implies, however, that Worlebury was still defensible; which, as has been remarked above, is most unlikely. Had such an event occurred, it would probably have been noteworthy enough to have been recorded in some of the old chronicles. So, also, if Worlebury had been the scene of a conflict between Saxon and Dane.

But there is another reason for rejecting the theory of a Saxon assault. It is furnished by the fact that two of the three complete skulls, and one half of the number of skeletons, found in the pits, were gashed by swords. Now, among the Saxons, this weapon was worn only by cavalry and by select men not under the rank of king's thegn*;—neither of whom would be likely to be personally engaged with the ordinary defenders of the fortress.

42. It would be superfluous to speculate upon any later contingency.

43. The only other means of tracing the probable period of the event are the time-indications furnished by the organic remains and the relics, mutually harmonized and adjusted by reference to historical data.

44. The remains are:—(a) human, (b) animal, (c) vegetable. The relics are:—(d) weapons, (e) tools, implements and utensils, (f) ornaments.

45. As it is most likely that all of these belonged to the besieged, the following discussion partly turns upon that assumption.

46. Though of prime importance in the first category, the human remains are too few to support a very positive induction. Their most noteworthy mark is that (apparently, with but a single exception) all the complete and fragmentary crania are of that type which

---

[21] The coins, and other surface-finds, are too few to point to occupation of any kind, peaceful or otherwise.

* *Archæologia*, Vol. XLV, part ii, p. 369.

Digitized by Google

indicates Ivernian ancestry. Not, however, necessarily that these individuals lived in primitive Ivernian times, so far as those were connected with Somerset;[22] because, *firstly*, the stature of the males of that race averaged 5 ft. 5½ ins.[23]—the tallest being no more than 5 ft. 6 ins.;—whereas two, at least, of the dolichocephalic men, out of the very small number whose remains were found, were tall—one of them very tall; and, *secondly*, the associated relics belong to a later age. It may, therefore, be safe to suppose that the slain in this encounter were members or slaves of a tribe, many of whom inherited Ivernian characteristics through a mixed ancestry. Such a survival of certain features of a special type is not uncommon; persisting, even, through centuries.[24]

47. The principal animal and vegetable remains—*bos longifrons*, red deer, horse, sheep, goat, pig, cereals and pulse—are such as are commonly found in British settlements of the bronze and early iron period.[25]

48. So also are the weapons,[26] tools, pottery,[27] ornaments, etc. Many of the 'finds' at Worlebury[28] are nearly matched by similar objects delineated in the plates illustrating General Lane Fox's account of his exploration of the pits in the Caburn camp,* which, he says, "was occupied by a Late Celtic people, whose arts and coinage show them to belong to a period immediately preceding the Roman conquest of" Sussex.† Herein is the

---

22 Professor Boyd Dawkins thinks that descendants of Ivernians remained as a distinct race in South Wales, and in South and West Ireland, down to the Roman period. And Professor Rhys says:—"It is hardly open to doubt that the Goidelic race was profoundly modified in many respects by its absorption and assimilation of the indigenous element." The Goidel, driven back by the Brython, "was, so to say, forced into the arms of the Ivernian native, to make common cause with him against the common enemy. Then followed the amalgamation of the Goidelic and Ivernian elements." Anthropologists are convinced "that we still have among us a large number of men who are at least in part the descendants of non-Aryan ancestors." *Celtic Britain*, pp. 261, 274, 275.

23 It has been stated that, while the 'Iberian' men averaged 5 ft. 5½ ins. in height, the stature of the 'Celts' [of what lineage is not stated] averaged 5 ft. 8½ ins. The average for Cornishmen is 5 ft. 7¼ ins.; for men of Somerset, 5 ft. 7 ins.; and for those of Devon (except near the Cornish border) 5 ft. 6 ins.

24 The state of the teeth shows that these people lived on coarse, gritty food. Those found in Anglo-Saxon cemeteries are usually not much worn down.

25 In South Britain the early iron period appears to have lasted from the 5th or the 4th century to the 3rd or the 2nd century B.C.; by which time the use of bronze for cutting instruments had there practically ceased. (Evans' *Bronze Implements*.) Some would bring the end of the early iron period down to the time of Cæsar's invasion, on the strength of his statement that iron was scarce in Britain. The use of bronze, in antiquity, for articles of utility and ornament continued for some centuries after the time when iron, in the form of steel, had superseded it for tools and weapons.

26 The iron shoe, or ferrule, is of uncertain use and date. See Chap. III, List of objects found: also Index to Plate IX.

27 "The ornamentation of the pottery of the finest quality [at Caburn] resembles that at Worlebury and Cissbury." See Chap. III, par. 8.

28 *E.g.*, iron leaf-shaped lance-heads and knife; bronze ring; horn knife-handle and comb; bone awl or pin, section of bone; spindle-whorls of stone and baked clay, stone rubber, shore-pebbles; and blue glass bead. The dot-and-circle ornament on the knife-handle is connected with the later bronze and early iron age. The flint arrow-head and knives do not, by themselves, necessarily point to a prehistoric date. Their use was continued to a much later time. Such were found at Caburn; and they have frequently occurred elsewhere in association with late Celtic and sometimes with Roman relics.

* *Archæologia*, Vol. XLVI, pp. 423-496. † *Ibid.*, p. 475.

Digitized by Google

special value of Caburn as an indicator of the probable date of the contents of the Worlebury pits.

49. The Walton-down pits* do not help us much. While some of the 'finds' are very early in character,—*e.g.*, the skeleton, with head of "savage type," the stone-spear, cleaver and arrow-heads; bronze being absent;—on the other hand, apparently in similar situations, and sometimes mingled with the older objects, were others of a much later period,—*e.g.*, coal, green-glazed pottery, iron nails and chain-links, and pieces of tin-plate!

50. The general inference to which the author has been led, after careful consideration of historical probabilities, and the evidence afforded by the contents of the pits, as particularly reviewed in this section, is that the time of the assault on the Somerset camp could not have been far from that which witnessed the taking of the Sussex one. To postulate a Roman attack upon Belgic-Brythons, is to find all the conditions agreeing therewith. Professor Macalister expressly states that people of the type found in the pits fought against the Romans: the weapons and other articles belong to that period: and the destruction of the works is just what we should predict as a sequel to a Roman siege of such a stronghold. This may be one reason why the history of that part of Somerset is a blank in the later classic, the Saxon and the monkish chronicles.[29]

51. If this general inference be sound, we may safely proceed to inquire whether it is possible to make it more definite by finding a date when such an event is likely to have occurred. The marches and victories of Cæsar during his two incursions into Britain in 55 and 54 B.C. were limited to the south-eastern part of the island, which, after his departure, was not again trodden by the foot of a foreign conqueror for a hundred years. In the autumn of 43 A.D., Aulus Plautius landed with a Roman army, the operations of which appear to have been directed mainly by his lieutenant Vespasian, who, it is related, fought thirty battles with the natives, took more than twenty of their towns, subdued two of the most powerful tribes, and subjugated the Isle of Wight, carrying the war into Gloucestershire, Oxfordshire and Essex. While these events, and later ones, in every other part of Britain, are narrated by the early historians, they are silent with regard to any operations in the West of England. But an inference may be drawn. One of the two tribes specially mentioned must have been the Belgæ, who had the reputation of surpassing in valour all the other natives of Gaul, from whence they came; and whose territory corresponded roughly with the counties of Hants, Wilts and Somerset, north and east of the Parret. This alone would point to a probability that the last-named district was brought under the power of Rome toward the close of the three or four years which intervened between the date of the landing and the year 47, when the conquered territory was annexed to the empire.

---

[29] Another may have been the unimportance of the marsh-region as an unhealthy, unfertile and thinly-populated area.

* Appendix to Chap. III, par. 7.

Digitized by Google

Possibly an adumbration of such local events may be furnished by the relation of Geoffrey, that, on one occasion, Vespasian, landing at the Totnes, or Talnas, shore (not yet identified), marched to besiege Caer Pensauelcoit (Penselwood), on the border of Somerset and Wilts. But we are not without positive proof that the Romans had secured a firm hold upon portions, at least, of North Somerset before the year 49; for a Roman pig of lead of that date was found at Blagdon, 12 miles east from Worlebury, and very near the lead-mines at Charter-house-on-Mendip.* This implies a full command of the road connecting these with the port near Uphill, at the mouth of the Axe, in Weston-bay; and also a settled state of the surrounding district. It may, therefore, be regarded as most probable, that Worlebury was taken and destroyed by Vespasian in or about the year 47 A.D. The notion that Ostorius Scapula invaded those parts of the country three years later, has already been discredited;† but, even if tenable on other grounds, it is absolutely negatived by the evidence that has just been adduced.

52. The conclusions resulting from the preceding inquiries may thus be summed up:—

1. At some unknown period before the commencement of our era, Worlebury was built by a powerful tribe—presumably of Goidelic stock—which was then in local occupation.
2. The state of the ruins, the evidence furnished by remains and relics, and inferences from historical records, alike lend support to the hypothesis, that the fortress was assaulted, taken and destroyed by a Roman force under Vespasian in or about the year 47.
3. There is no ground for the opinion that Ostorius Scapula conducted any military operations in Somerset in the year 50.
4. The statement that Criomhthann Mór, "king of Ireland and Alba" from 366 to 379, invaded Somerset, "and erected fortresses there as far inland as Glastonbury," rests upon a strained interpretation of an obscure chronicle; and is devoid of authority.
5. It is merely an assumption (and an improbable one) that, as one of the results of the battle of Deorham, in the year 577, North Somerset was ceded to Ceawlin. The current opinion that he stormed Worlebury, and planted his banner on its ramparts, appears to rest upon no better basis.
6. If tradition is to be trusted, there was, at some unknown date, an incursion of Danes into the country behind Uphill:—an event which may have been repeated.
7. Nothing has been found to corroborate an alleged tradition that, about the middle of the 9th century, some Danes were defeated at Brent, and fled to Brean-down, where they were blockaded—escaping by sea.

---

* *Arch. Journ.*, 1859, Vol. XVI; also 1879, Vol. XXXVI, p. 70. † See Chap. IV, par. 5 and notes.

Digitized by Google

8. The statement that, in 998, Danes, landing at Brent, were defeated, and fled to Worlebury, whence they sallied forth, to be again defeated at Biddisham by Saxons, who took and burned their camp, proves to be a mistaken reading of a narrative of events which occurred in 894 in distant parts of England.
9. It is highly probable that, in the year 915 (or 918), Worlebury, though in ruins, was one of the stations along the eastern and southern coasts of the Bristol-channel, which were manned by the king (Edward the elder) to prevent an apprehended landing of a Danish naval force under Ottar and Hraold.
10. It is not improbable that the sons of Harold, during their raids into Somerset in 1068, may have wasted the country around Worlebury: but there is no authority for the statement that they were utterly routed between Congresbury and Worle in a conflict with a Norman force under Drogo de Montacute.

DESCRIPTIVE INDEX TO THE PLATES.

FRONTISPIECE.

These bird's-eye views are intended to represent, as closely as possible, what must have been the original aspect of Worlebury and its surroundings. The utmost care has been taken to adhere faithfully to every local fact, without the admission of any artistic licence, except the slight one of sprinkling the marsh with bushes, in order to distinguish it the better from water.*

The upper view represents the scene as it would appear to a spectator looking N.W.,—the sea-ward southern slopes of Worle-hill in the foreground, with bee-hive huts, looking down on the islet of Knightstone, and crowned with the camp: beyond, the Channel, with Flat-holm; (Steep-holm being an inch out of the picture, to the left): the Welsh coast, from Breaksea-point to Cardiff, in the distance.

The lower view, looking S.E., and inland, has, in the foreground, the camp on the hill, with the tumulus at its extremity: Bearnbeck below, and Knightstone beyond, with Weston-bay† and the North-marsh, backed by the hills about Bleadon and Uphill, over which rises Brent-knoll in the extreme distance. Brean-down is just out of the picture, to the right.

* The mechanical difficulties of rendering the distant water and hills, by means of the pen, with sufficient delicacy, have been too great to be entirely overcome; and this defect has unavoidably been farther exaggerated by the process of photo-lithographic reproduction.

† The line of beach is shown as it now is: there being no evidence that it has materially changed within historic times.

Digitized by Google

PLATE I.

This plan of Worle-hill and its environs has been laid down on the basis of Sanders' outline geological map of the Bristol coal-fields, with some revisions of minor details. The hill-shading has been drawn, and the antiquities inserted, from personal survey. No modern works are shown: but the names of a few natural features, and local sites, are given to make the plan intelligible. The dotted line along a portion of the southern side of the hill indicates the ancient coast-line, as far as it has been traced. It has been carefully deduced by Mr. E. Y. Poole, of Weston-super-mare, (who has kindly allowed me to record it on the plan), from data furnished by excavations. In the present state of our ignorance of the stratification of the local levels, it is impossible to say what part of this line was washed by the sea when Worlebury was established.

An accurate plan and view of the *tumulus* on Castle-batch,—one of the three shown on the plan of the hill,—being in the possession of the writer, who surveyed it in 1872, it may appropriately figure as an illustration on this plate, although strictly outside the scope of the present work. It seems to be composed entirely of earth, and remains intact. A radial line through the entrance points 27½° W. of S. On the south side is a footpath; and the N.E. semicircle is fenced-in by a modern hedge and ditch. In wet weather, pools of water lie in the middle of the crater, and in the northern part of the shallow ditch.

Another, at Ashcombe, (now in ruins), which was examined by Mr. Warre, appears to have been precisely similar.

A third, the site of which (near the entrance to the pier) is shown in the plan, was destroyed many years ago.*

The 'inset map' of a portion of the county of Somerset includes most of the places in the district which are mentioned in the text. The ancient camps are distinguished by black spots.† The dotted lines are those of the British main roads—the only ones that have yet been described. The principal streams and lines of artificial drainage, as now existing, are inserted, to indicate the hydrography of the levels. Walton-down, S. of the village of Walton, and overlooking the Channel, is just within the marginal line; and Avon-mouth is 6 miles beyond it, to the N.E.

The camps included in this map are,—on the coast, St. Thomas' Head, Worlebury, and Brean-down; on the great British road, Cadbury (Tickenham), Cadbury (Yatton), Brent-knoll, and Cannington; on the chain of hills running east from Brean-down, Ad Axium, Banwell, Dinhurst and Dolbury.

* There was great difficulty in finding anyone who remembered its existence: but at length I obtained clear and satisfactory evidence that it stood on ground now traversed by the road, close to the southern side of the entrance to Bearnbeck pier.

† These, which were very clear in the original manuscript map, have unavoidably lost much of their distinctness by being photolithographed to a reduced scale.

PLATE II.

This new and elaborate plan of the camp and its immediate surroundings is a *fac-simile*, reduced by photography from a large drawing which has been plotted from very careful measurements and observations made with tape and prismatic compass. Though the results are not quite so accurate as those which would have been attained by a regular instrumental survey, the plan is very much better than that of Mr. Martin Atkins, much fuller of information, and quite correct enough for every practical purpose. Every detail is drawn as distinctly as the scale would permit. The positions of all the lengths of wall-facing which were found, with other features of the ramparts, are laid down. Modern foot-paths, and garden-walls are also inserted. The destroyed ancient outworks are dotted in from Mr. Atkins' plan.

PLATE III.

An outline Index-plan to Plate II, requiring no farther explanation.

PLATE IV.

No. 1 is a longitudinal section through the camp, (looking N.), from the foot of the western entrance to the outermost of the four ditches immediately environing the "keep". It is drawn to a smaller scale than that used for the other sections.

No. 2 is a transverse section of the upper part of the hill, through the "keep", (looking W.), along the dotted line in the Index-plan, marked Sec. 2.

No. 3 is a transverse section of the upper part of the hill, (looking W.), along the dotted line in the Index-plan, marked Sec. 3, passing down the great hollow-way through the cliffs. On the left-hand is shown, in elevation, the garden-wall of Penwartha; and on the right-hand, is a section of a part of the *talus*.

No. 4 is a transverse section of the upper part of the hill, on the northern face, (looking E.), along the dotted line in the Index-plan, marked Sec. 4, through the ditch referred-to in Chapter II, 11, and through the head of the *talus* below.

No. 5 is a section through the north-eastern gateway, looking S. The average gradient of the road is 1 in 10.

Digitized by Google

No. 6 is a section through the western gateway, and the shallow hollow above it, looking N. The average gradient of this entrance, from bottom to top, is 1 in 5.

No. 7 is a section through the grand gateway, looking S., showing with what a depth of rubbish it is filled. The average gradient of the ground is 1 in 6.

The heights of the principal points above *datum*, (the general level of the plain, about 10 feet above high-water of spring-tides), have been deduced from a great number of observations taken with a pocket-aneroid; and are sufficiently near to the truth.

The fall of the ground on either side, from the crown of each section, was measured with a tape, from lines leveled against the sea-horizon, which was generally visible. It may be well to mention that sloping ground usually appears to the eye to be about twice as steep as is indicated by a correct section. This should be taken into account in estimating the conditions of an assault.

PLATE V.

Fig. 1. A plan of the piece of wall, cleared of *débris*, from the grand gateway, southward, for a length of 90 feet. The curved line at the south-eastern corner represents a scarped rock, from 12 to 18 ins. high, running down the steep descent. From lack of space, the edge of the outer slope of the *débris* is not shown. The inner ramp (one edge of which is now partially broken down) is crossed by the line of section. On the outside, this also crosses a curious convex bulge, with a face battered about 45°. Where this curves up the slope, on the northern side, it is merely founded on the surface of the ruined work, instead of being carried up from the ground, as is the front portion. There are no traces of a wall along the top of this slope, nor between it and the wall along its foot, which runs into that of the bulge referred-to above. Northward of the top of the inner ramp, the line of stones, marking the inner face of the parapet, is level with the rest of the mass, forming merely a spine, similar to that which can be seen almost everywhere on the ridge of the *agger*. One of the cups, 3 feet in diameter and 2 feet deep, is shown in the prolonged work flanking the gateway. There is a similar cup in the northern flank.

Fig. 2. A section across Fig. 1, at 25 on Index-plan. The crest of the *agger*, at this point, now stands 16 feet above the outermost footings, or about 26 feet above the toe of the *débris*. Its height above the ground inside is 8 feet.

Only those wall-faces in the sections which were actually traced to the ground are shaded black. There can be no doubt that those also which are drawn in outline are similarly founded, although they have not been traced below the black portions.

Fig. 3. A plan of the eastern rampart of the "keep", for a length of 90 feet north of the modern pathway in its south-eastern angle. Along the southern half, only the inner and outer walls of the heart of the work were traced. Their divergence, as the pathway is approached, is largely due to their batter,—being, at that point, nearer to their footings than at the northern end. The heap of stones in the middle, with a modern-looking square footing on its western side, is probably an ordnance-carn, the materials for which were obtained by making the cup close by it. The innermost wall, boldly built, was found to be much ruined. It was necessary to re-erect a few feet of it, which fell while it was being cleared. The intermediate faces, including the inner one of the parapet, are very poor. The two outer ones are good. The higher of them is, no doubt, that which is shown in Mr. Bloxam's section, referred-to in Chapter II, par. 12, note 13; also in par. 18.

Fig. 4. A section across Fig. 3, at 24 on Index-plan. Here the crest of the *agger* stands 9 ft. 6 ins. above the level of the ground. The intermediate faces, one of which is shown in the section, appear to be merely superficial. On the inner side of this section, sheets of small stones, found at uncertain intervals, probably mark the original levels of the stages.

Fig. 5. A section across the outer *agger*, east of the "keep", at 23 on Index-plan. The crest of the ruins at this point now stands 8 ft. 6 ins. above the ground on the inside, at the foot of the *débris*; 11 feet above the top of the counter-scarp of the ditch; and 15 feet above the bottom of the ditch. There is a doubtful face appearing to divide into two the thickest of the inner reinforcements—that next to the parapet. All the face-work in this section is rude, and much injured.

The batter of the walls varies greatly, from almost nothing to 45°. Perhaps the ruling batter may be about 1 in 4.

Fig. 6. The upper diagram records the measurements only (not the form) of the wall (a little to the north of the section, Fig. 2) taken by Mr. H. G. Tomkins on the 12th September, 1852. No more than three stages can now be found. The lower diagram similarly gives the only recorded measurements of a section (apparently on the line of the section, Fig. 2) taken, on the same day, by Mr. W. S. Tomkins. This shows the same number of stages that I found.

Fig. 7. A diagram, taken from one of the plates illustrating Mr. Tomkins' Bath lecture, intended to represent the scale-like system of wall-structure which Mr. Warre claimed to have discovered.

PLATE VI.

Fig. 1. A plan of the middle portion of one of the internal rectangular appendages to the main rampart,—20 on Index-plan. The whole of the area occupied by it is covered with large and small stones confusedly lying in a layer varying in depth, from the northern edge, where it is shallowest, to a maximum of 18 inches, near the rampart. The length is 53 feet, and the breadth, measured from the face of the rampart-wall, is about 12 feet. This wall-face probably marks the inner side of the parapet—here visible for only a very short length. At the distance of 4 ft. 6 ins. from this, a length of 15 feet of facing, parallel to it, and about 18 inches high, can be traced;—the interval (now covered with stones, but shown in the plan as cleared for purposes of exploration) having formerly

Digitized by Google

been a passage which, judging from the analogy of Fig. 2, traversed the whole length of the occupied space. 3 feet behind this detached facing, a much ruder line of stones is visible; and, between them, the rubble is packed more thickly than in any other part of the area, suggesting the idea that here are the remains of a rude foundation, 3 feet thick. The edges of the stone-covered area are defined with tolerable clearness. In order to distinguish the detached foundation, just mentioned, the general surface is represented as more thinly sprinkled with stones than it really is. In some parts of this, as in one or two other instances, there are faint indications (which, however, may be deceptive) that the larger stones, bedded on the ground between the passages and the northern edges, were rudely laid in close longitudinal rows.

Fig. 2. A plan of the eastern end of another of these objects,—that nearest to the western gateway,—17 on Index-plan. The western half is obscured by growth of vegetation. Its limits are less distinctly marked than are those of No. 20. Here also a passage, from 4 ft. 3 ins. to 4 ft. 6 ins. in width, can be traced for a length of 18 feet between the parapet and a rough wall-face indicated on the plan. The intermediate space (left blank in the drawing, as cleared for exploration) is covered with stones. No back-facing of a detached foundation, as in No. 20, is here to be found. The area, as in all the other cases, is covered with a thin stratum of loose stones, of all sizes, which become scattered near the edge. They are much more numerous than the plan indicates. The length of this sheet of stones is 43 ft. 6 ins., and the breadth, from the parapet, is from 13 to 14 feet.

Another of these objects—the second from the western gateway, and 18 on Index-plan—is too much injured to be planned in detail. It is 54 feet in length. A detached face, a few feet long, similar to the 18 ft. length planned in Fig. 1, was found; but no opposite parapet-face remained: so that the width of the passage could not be measured.

The length of the third from the western gateway—19 on Index-plan—cannot now be ascertained. Its breadth is about 15 feet. No features, worth recording on a plan, remain; but, in its north-eastern quarter, the stones seem rudely placed in six or seven rows, slightly suggestive of design.

Fig. 3. A section of the ditch, and part of the outer *agger* of the "keep", at 26 on Index-plan, just below the foot-way crossing its south-eastern portion. The thin ragged line, in this, as in the following cases, indicates the top of the *débris* with which the excavation was filled. At this point, the scarp of the ditch is formed by a vertical rock, 3 feet high, which, however, soon runs down into the slope. This part of the ditch is 13 feet wide, and 5 feet deep. On the northern side of the foot-way, the ditch is only 12 inches deep, and is flat-bottomed. Only the outer wall-face was sought for in this section, where, owing to dilapidation, it remains only 12 inches high.

Fig. 4. A section of the same part of the ditch, 10 feet south of the foot-way. Here, the wall-face is 2 ft. 9 ins. high; and the rock gives place to a steep shelving scarp, with some slight appearance (perhaps accidental) of having been rudely pitched. At this point, the ditch is 13 feet wide, and 4 ft. 9 ins. deep.

Fig. 5. A section of the principal detached ditch, 200 feet s.w. of the grand gateway, at 28 on Index-plan. The width, on the slope, is 13 feet; that of the bottom, 2 feet; and, the depth, from the original surface, is 3 ft. 6 ins., or 2 ft. 6 ins., measured vertically from the edge of the counterscarp, which is of rock and earth. The scarp is of earth. The heap of stones at its top may be the remains of a breastwork; but no walling is visible.

Fig. 6. A section of the same ditch, near the middle of its length, at 30 on Index-plan. The width, on the slope, is 12 ft. 6 ins.; and the depth, from the original surface, is 6 feet, or 4 ft. 6 ins., measured vertically from the edge of the counterscarp. No rock is here visible. At the top of the scarp, a level bench, 3 ft. 6 ins. wide, is partly cut out of the surface-rock.

Figs. 7 and 8. A plan and section of the same ditch, 70 feet east of Penwartha, at 31 on Index-plan. This shows one of the most distinctly marked portions of a feature similar to the detached "slingers' platforms" of Mr. Martin Atkins. Here, the ditch is 12 feet wide, and has been cut about 5 feet deep, or 4 ft. 6 ins. below the edge of the counterscarp, which is in loose, stony ground. The scarp is a smooth rock-face, with a narrow bench at half its height. In this case, the stone-filling is shown in the drawings. No distinctly marked breast-wall could be found; but, above the ditch, the stones are small, and form a nearly level bench, 3 feet wide; behind which is the triangular stratum of small stones, 7 feet high, from base to apex, and about 13 feet wide. At the apex, it is 5 inches deep; 3 feet lower, it is 8 inches deep; and, at the upper edge of the bench, 12 inches deep. At its lower edge, the stones lie 2 ft. 6 ins. deep.

Fig. 9. A section of a similar, well-marked triangular object, above Penwartha, at 32 on Index-plan. This part of the ditch has been emptied and quarried, to get stone for the garden-wall. At the apex, the stones lie 6 inches deep; 5 feet lower, the depth is 10 inches; and, at the edge of the quarried part, 8 feet below the apex, it would be 2 feet before it was disturbed.

Figs. 10 and 11. A plan and section of one of Mr. Atkins' "slingers' platforms",—that at 29 on Index-plan. It measures about 12 feet along the base, and is about 8 feet high. The depth of the layer of stones is less than 6 inches. It is probable that the slight apparent excavation is partly, if not entirely, due to the rising of the surrounding surface by the growth of grass. The edges uniting at the apex are straight, and clearly defined; but the basal edge is ragged. None of these detached objects have been furnished with ditches.

Figs. 12, 13 and 14. A section, elevation and plan of the low breastwork, noticed in Chap. II, par. 14; and situated at 27 on Index-plan. The plan (14) is drawn with the south side uppermost, to match the elevation (13). The transverse section (12) is taken looking E. At the back of the earthen bench, 2 ft. 6 ins. wide, an earthen ramp rises out of a hollow, which was found filled with stones to the depth of 3 feet. The breastwork in front, 2 feet high, and tolerably well built, could be traced for a length of 8 feet. At its eastern end it terminates in a traverse-wall, 12 inches high, which, at the juncture, is bonded into it. No external wall-face could be found. The space in the plan and elevation, shown clear of stones, is the part that was emptied in the work of exploration.

Digitized by Google

Fig. 15. A typical section (not to scale) of the *talus*, below the land-cliffs, as shown by trenching through it at 33, 34 and 35 on Index-plan. Along the upper edge, there is generally a superficial belt of very small stones, in a stratum about 6 inches deep, forming a kind of macadamized foot-way. Below this belt, the mass consists of angular blocks, of the prevailing size. The largest stones were generally found at the bottom of the mass, on the ground, about 12 feet below the upper edge. The greatest depth of the stones in each section varies with its width, and with the manner in which the materials are heaped. It ranges from 2 feet to about 3 ft. 6 ins. No traces of walling have been found.

Figs. 16 and 17. Transverse and longitudinal sections through the spindle-shaped stone-patch, below the rocks flanking the western gateway. This ditch is about 3 feet deep in the middle, and from 12 to 18 inches near its edges. There are no remains of walling.

Fig. 18. A longitudinal section, on the line of the slope, through the ditch under the western part of the rectangular sheet of stones north of the western gateway, and on the east side of the way to the spring, taken about 6 feet from the path. The greatest depth of the mass of stones filling this ditch is 6 feet. Near the top, it is 3 feet deep. No walling has been found.

Figs. 19 and 20. A plan and cross-section of the north-eastern entrance—22 on Index-plan. The plan shows the *débris* removed from the front of the wall-face, flanking the gateway, which could be traced only for about 20 feet. It also shows the ruined end of one of the outer wall-faces, cleared of rubbish. The *agger* behind these walls is only partially drawn. At the western edge of the path, the ground has been excavated to a depth of about 2 feet; and, in the southern end of this hollow, four large stones are bedded, with their tops near the surface of the road, and their faces toward the west. The width from this face to that of the opposite wall is 11 feet. No other trace of walling could be found on the western flank of this gateway, though the rubbish was, in two places, penetrated several feet. The soil has accumulated to the depth of 9 inches upon the original surface of the path which, where free from stones, is only from 5 to 6 feet wide.

Fig. 21. A plan of the western entrance—16 on Index-plan. This shows the western end of the great *agger*, finished squarely, and set in a shallow excavation. About 11 feet behind the edge flanking the entrance, are the footings of a straight wall-face, 19 feet long, terminating, at its western end, in a stone with an acute angle, like a quoin at which one of the outer faces met this transverse one. The depth of the ruin behind these walls is very small. The space between the transverse wall and the flanking edge is covered with a sheet of stones, about 12 inches deep, except at the north-eastern corner where, for a space about 6 feet square, the stones lie 18 inches deep. The drawing represents the western corner as though artificially rounded. This is not the case: it is merely an accident. Around the north-eastern corner, a few stones are set in the ground at a right-angle, with some appearance of design. From these, the ground declines to the edge of the excavation. A portion of the space between the *agger* and the rocks is occupied by a flight of five rude steps, which, (with two or three similar detached ones, to the south of them), are left unshaded, to distinguish them from the natural rock. These steps are bedded in the upper part of a shallow grassy hollow, at the lower end of which, immediately outside the marginal line of the plate, is the gap in the rocks through which passed the path to the spring. The lowest step rises 15 inches, and the whole flight, 3 feet.

Figs. 22 and 23. A plan and cross-section of the oblong pit, or chamber—6 on Index-plan. Its dimensions are,—length on northern side, 17 ft. 3 ins.; breadth, at west end, 13 ft. 4 ins., at east end, 14 ft. 2 ins., in the middle, 13 ft. 9 ins. A wall, 2 ft. 2 ins. high, backed by a steep slope, 3 ft. 10 ins. in vertical height, forms the northern side, returning, for a very few feet, along the eastern and western ends, the remaining portions being broken down. The southern side is formed by the natural rock, 18 inches high. The grassy floor is nearly level, and seems to be not far above the rock-bottom.

Figs. 24, 25, 26 and 27. An end-elevation, longitudinal section, plan, and cross-section of the southern portion of the fosse separating the "keep" from the rest of the inclosure. The transverse wall, forming its southern termination, is now 10 feet high, and is continued westward into the body of the *agger*. At its eastern end, there is a shallow recess, 15 inches wide at bottom, but broadening upward, divided from the rest of the wall by a well-built quoin. The return, on the eastern flank of the fosse, is formed by a rough wall, now about 4 feet high, standing on a rounded bank, on portions of the face of which is set some rough pitching of large rounded stones. A block of natural rock in the bottom partially shuts in this deepest portion of the fosse, leaving a passage, 4 ft. 3 ins. wide, between it and the western side of the trench. This is formed by a perfectly straight and smooth wall of rock, (no doubt, a line of natural cleavage), on the southern part of which stands a poor, battering wall joining the end-wall at a right-angle, and ruined beyond that portion which, in Figs. 25 and 26, is shown as standing. The bottom of the fosse is formed by a layer of washed earth, a few inches deep, resting on soft natural soil. This area, below the protruding piece of rock, is 12 ft. 6 ins. long, and 6 feet wide. Above the rock, the width is 8 feet. Between the footings of the flanking walls, the width of the fosse is 12 ft. 3 ins. No artificial work is seen to the north of the portion here drawn.

PLATE VII.

Figs. 1, 2 and 3. A plan of the group of three pits—8 on Index-plan. Nos. 1 and 2 are separated by a partition of rock, barely 2 feet thick. Nos. 2 and 3 are a little more than 3 feet apart.

Fig. 4. A perspective view (looking W.) of the cup (now destroyed) on the declivity of the *agger*, south of the north-eastern gateway. It was 2 ft. 6 ins. in diameter at the top, and the same in depth. It bore no appearance of structure, except that the stones forming the bottom were gathered rather closer than usual, the interstices being filled with small fragments.

Fig. 5. A perspective view (looking S.) of the steened pit—9 on Index-plan.

Fig. 6. A longitudinal section of the same (looking W.). All

Digitized by Google

the details are accurately drawn. At the surface of the ground, the size of the pit is 8 feet by 7 feet. Its depth, to the top of the highest part of the steening on the west side, is 3 ft. 1 in.; to the edge of the same at the north end, it is 3 ft. 7 ins.; and at the south end, 3 ft. 9 ins. The total depth to the rock-floor varies from 5 ft. 3 ins. at the south end to 6 feet in the rift close by. At the north end, the depth is 5 ft. 4 ins. The present heights of the stone lining, at various points, now are,—at the north end, 21 inches, at the south end, 18 inches, and at the highest part of the west side, 27 inches. When measured by Dr. Tomkins, these depths were found to be respectively, 24, 23, and 27 inches; that of the east side being 23 inches. The diameters of the oval well, formed by the stone-lining, are, at the top, 4 ft. 6 ins. by 3 ft. 8 ins.; and at the bottom, 4 ft. 4 ins. by 3 ft. 10 ins.

PLATE VIII.

Fig. 1. A perspective view of the stone-work at the north-western angle of the rectangular chamber—6 on Index-plan,—copied from a pencil drawing made, in 1852, by Mr. Tomkins. The work still remains in the same state.

Fig. 2. An elevation of the eastern end of the north wall of the same chamber, as it is now.

Fig. 3. A good typical example of the Worlebury-walling, as exposed on the southern flank of the grand gateway.

Fig. 4. A piece of walling on the northern flank of the same gateway, now buried beneath the *débris* with which the passage is choked.

Fig. 5. A bold piece of walling exposed at about the middle of the northern side of the "keep", facing toward the inclosure.

Fig. 6. A selected piece of the walling of Dolbury, given for the purpose of comparison. The size of the large stone is 32 inches by 21 inches.

PLATE IX.

Figs. 1, 2, 3. Vessels, (apparently wheel-made), fire-marked, restored from fragments of pottery found in the pits.* Nos. 2 and 3 are incomplete. The dimensions, in inches, are as follow:—

	1	2	3
Height	$5\frac{1}{2}$	5	$5\frac{1}{4}$
External diam. at mouth	6	$6\frac{1}{2}$	
,, ,, at swell	$6\frac{5}{8}$		
,, ,, at bottom	$3\frac{5}{8}$	5	$3\frac{5}{8}$
Thickness of sides	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{3}{16}$

No. 1 is of black material, with a reddish surface: No. 2 is of a blackish red-brown ware: No. 3 is of a blackish ware. All are coarse and unglazed. Nos. 1 and 3 are quite plain; but No. 2 has an ornamental pattern incised on its swell, very similar to that on some superior pottery found at Dolbury.

Fig. 4. A socketed iron leaf-shaped lance-head, much rusted, $3\frac{5}{8}$ ins. long: external and internal diameters of socket, $\frac{3}{4}$ in., and $\frac{1}{2}$ in. From a pit.

Fig. 5. A socketed iron leaf-shaped lance-head, much rusted, $5\frac{5}{8}$ ins. long: external and internal diameters of socket, $\frac{3}{4}$ in., and $\frac{3}{8}$ in. full. From a pit.

Fig. 6. A socketed iron cone, much rusted, except the point, which is still good. A portion of the shaft (reduced to charcoal) remains within it. Its length is $7\frac{1}{2}$ ins.; and the external diameter of the socket, in which is a nail-hole, is $1\frac{5}{8}$ in.† From a pit.

Fig. 7. An iron spike: length $4\frac{1}{2}$ inches; thickest part $\frac{1}{4}$ in. by $\frac{3}{16}$ in.‡ From a pit.

Fig. 8. An iron boring-bit or reamer, $3\frac{3}{16}$ ins. long; $\frac{3}{16}$ in. by $\frac{1}{8}$ in. at thickest part; and tapering to a blunt point. Very little rusted. From a pit.

Fig. 9. An iron chisel, in good preservation, $2\frac{7}{8}$ ins. long; $\frac{7}{16}$ in. broad at edge (which is still good); and $\frac{1}{4}$ in. full in diameter at end of shank. From a pit.

Fig. 10. A ring made of round iron, spirally twisted. External diameter, $1\frac{5}{8}$ in.; internal ditto, $\frac{3}{4}$ in. full; depth, 1 in. Found, with another similar ring, on the floor of a pit, put away under a projection of rock.

Fig. 11. A portion of an iron bridle-bit [?] $3\frac{5}{8}$ ins. across the curve: thicknesses—at central boss, $\frac{7}{8}$ in., at root of arm, $\frac{9}{16}$ in., at neck of knob, $\frac{3}{16}$ in., at knob, $\frac{1}{2}$ in. From a pit.

Fig. 12. A charred piece of fir, from a pit. Its length is $3\frac{3}{16}$ ins.; and its size, at thickest end, is $\frac{3}{4}$ in. by $\frac{5}{8}$ in. Half an inch from the pointed end is a $\frac{5}{16}$ in. hole; and, $\frac{3}{4}$ in. farther, a $\frac{1}{4}$ in. hole, both drilled through the piece. A diagonal groove, $\frac{3}{16}$ in. in diameter, at right-angles with the holes, intersects a part of the flat square end.

* Dr. Thurnam told Mr. Tomkins that he believed the form of these vessels to be unique.

† Mr. Warre thought this to have been the ferrule for the butt-end of a Saxon spear: but the socket is not split, as is usual in Saxon work. Mr. Tomkins regards it as a plough-share, of a form still used in the East: but, if that were its use, the attachment, fastened only by a small nail, would not long bear the strain. A similar object, 4 inches in length, and with outer diameter $1\frac{1}{8}$ inch, was found in an Anglo-Saxon grave at Sleaford; and is described as an "iron spike, or ferule, probably from the butt-end of a spear." (*Archæologia*, Vol. L, part 2, p. 406, and plate xxv. fig. 6). See also, for a like example, *Ancient Wilts—S. Wilts*—Vol. I, p. 99, plate xi). The staves of Roman spears were sometimes shod with bronze-spiked shoes of similar form, so that they might be stuck upright in the ground. But this relic is exactly like the spikes with which the ranging-rods of a land-surveyor are shod; and, had it not been associated with ancient iron weapons, in a similar state of preservation, (the charred wood in the socket being another voucher of antiquity), it might be thought to have been lost on a survey.

‡ This, with figs. 8 and 9, and four others, not figured, were called "javelin-heads" by Mr. Warre: but it is like a boring-bit.

Digitized by Google

PLATE X.

Fig. 1. A light-coloured flint arrow-head, with broken point. Present length, 1 in., breadth, $\frac{5}{8}$ in.

Fig. 2. A white flint core, shaped like an arrow-head. Length, $\frac{11}{16}$ in., breadth, $\frac{9}{16}$ in.

Fig. 3. A white flint core, shaped like an arrow-head. Length, $1\frac{1}{16}$ in., breadth, $\frac{1}{2}$ in.

Figs. 4, 5, 6, 7. Flint knives. All these flints, with a few others, were found in pits.

Fig. 8. A piece of horn, $2\frac{3}{4}$ ins. long, $\frac{11}{16}$ in. diameter at the thick end, and $\frac{7}{16}$ in. at the other. From a pit. The truncated end is perforated with an $\frac{1}{8}$ in. hole, apparently not drilled. Its rim is double-beaded; and, at the distance of 1 in. there is a similar double-beaded collar, $\frac{1}{8}$ in. wide. These collars are united by two longitudinal bands, each consisting of three incised lines, between which are six cup-and-ring, or dot-and-circle,* ornaments, in two rows of three. The ornamentation is confined to one half of the cylindrical surface. Mr. Warre thought it was a musical instrument: but such objects are usually regarded as knife-handles.

Fig. 9. A section of a marrow-bone, from a pit. Diameters, 1 in. and $\frac{7}{8}$ in.: depth, from $\frac{3}{8}$ in. to $\frac{7}{16}$ in.: thickness, $\frac{9}{16}$ in.

Fig. 10. A hemispherical bone button or boss [?] formed of a section of the head of a human *humerus*. It is $1\frac{5}{8}$ in. diameter, $\frac{11}{16}$ in. thick; and is perforated with a neatly drilled $\frac{1}{4}$ in. hole. From a pit.

Fig. 11. A portion of a comb of white horn, from a pit.† It is quite flat. Traces of lamination may be seen at its edge. The back is $1\frac{1}{8}$ in. long, $\frac{5}{16}$ in. wide, and $\frac{1}{16}$ in. thick. It had twelve teeth, cut with the grain.

Fig. 12. A bone awl, or pin, 5 ins. long, from a pit.‡

Fig. 13. A spindle-whorl of baked clay, having the appearance of very fine yellow sand-stone, perforated with an $\frac{1}{8}$ in. hole. It is $1\frac{5}{8}$ inch diameter, and $\frac{3}{4}$ in. thick. From a pit.

Fig. 14. A spindle-whorl of very fine red sand-stone, perforated with a hole about $\frac{1}{8}$ in. diameter. Its diameters measure $1\frac{3}{16}$ in., and 1 in., and it is $\frac{1}{2}$ in. thick. From a pit.

Fig. 15. A semi-translucent glass-bead, of a deep blue colour, $\frac{3}{8}$ in. diameter, $\frac{3}{16}$ in. thick, and with a hole about $\frac{1}{8}$ in. diameter. From a pit.§

Fig. 16. Coloured bugles and other long beads, red, green, brown, sapphire, and horn-coloured. Found in the surface-soil.‖

Fig. 17. A silver *fibula*, $\frac{11}{16}$ in. diameter, and about $\frac{1}{16}$ in. thick, found just above St. Kew's Steps. Sir A. W. Franks considered it to be late Roman. The faceted knobs seem to indicate oriental influence.¶

Fig. 18. A very small, twisted bronze *armilla*, with flattened ends, which have been riveted together, or hooked with a stud. Its diameters are now $1\frac{1}{4}$ in. and 1 in. From a pit.**

Fig. 19. A fragment of a bronze ring. From a pit.

Fig. 20. A thin curved bronze tongue, $1\frac{1}{8}$ in. long, and $\frac{1}{8}$ in. wide, ornamented with cup-and-ring pattern.

Fig. 21. A thin curved piece of bronze, $1\frac{1}{8}$ in. long, $\frac{1}{8}$ in. wide, with pattern on the convex side. Part of an *armilla*.

Fig. 22. A fragment of a bronze *armilla*, $1\frac{1}{4}$ in. long, $\frac{1}{16}$ in. wide, and barely $\frac{1}{16}$ in. thick.†† When complete, it was 3 ins. diameter.

Fig. 23. A fragment of a thin bronze *armilla* [?]. It is $2\frac{1}{8}$ in. long, and $\frac{1}{8}$ in. wide.

Fig. 24. A bronze furciform object, with knob of acorn-pattern. Its extreme present length is $1\frac{3}{8}$ in., its width, $\frac{9}{16}$ in., and the thickness of the prongs, $\frac{1}{16}$ in. Both prongs seem to have been broken.

Fig. 25. A plate of bronze, slightly curved, and probably part of an accoutrement. It is $1\frac{3}{8}$ in. long, and $\frac{11}{16}$ in. wide. The concave side is left dull: but the convex side has been burnished, and is now patinated.

Figs. 26 and 27. Pieces of bronze binding, $3\frac{1}{8}$ ins. and 2 ins. long respectively.‡‡

It is not known which of these bronze objects, numbered 20 to 27, were among the surface-finds, and which were the "fragments of bronze" stated by Mr. Warre to have been found, presumably in the pits. Mr. Warre stated that he had met with nothing Roman therein; but he mentions finding, near the bottom of the same pit that contained the two iron rings, "part of a very small ring, apparently of bronze,"—the only object of this material which is explicitly stated by him to have been so found. Mr. Tomkins says that No. 18 also was from a pit.

Figs. 28 and 29. Pieces of charred fibre or sedge plait, referred to in Chap. III, par. 16, and considered by Mr. Warre to have formed part of a mat or basket. In consequence of its burnt condition, it is very difficult to decide of what material the plait was made. It is doubtful whether it was ever worked up into a mat or basket.

* See Appendix to Chap. III, 8, for a good analogue.

† *Ibid.* For the use to which these combs were put, refer to *Archæologia*, Vol. XLVI, art. Mount Caburn.

‡ A similar tool is figured in one of the archæological plates in Ogilvie's *Comprehensive English Dictionary*.

§ See also Appendix to Chap. III, 8. Similar beads were found in the Anglo-Saxon cemetery at Sarr. See *Archæologia Cantiana*, Vol. VII, Pl. VII, clxxxviii; Pl. VIII, lxxv, the eighth bead in the row.

‖ These beads are similar to some of those found at Sarr, but smaller and ruder. See *Arch. Cant.*, Vol. VII, Pl. VIII, cclx, xcvi, (blue triple bead), and clviii, (yellow quadruple bead).

¶ A bronze fibula, of almost exactly similar pattern, but somewhat larger, found in an Anglo-Saxon grave at Harnham-hill, near Salisbury, is described by Mr. J. Y. Akerman in *Archæologia*, Vol. XXXV, p. 264. It is figured in Pl. XII, fig. 16. See also *The Land and the Book*, p. 129, for silver ornaments of similar form.

** See also Akerman's *Archæological Index*, Romano-British ornaments, Pl. XIII, fig. 25.

†† A bronze *armilla*, of the same pattern and size, is figured in *Illustrations of the Remains of Roman Art in Cirencester*, by Prof. Buckman and C. H. Newmarch, Pl. XI, fig. 3.

‡‡ Similar edging, or binding, but of silver, was found in a grave at Sarr. See *Arch. Cant.*, Vol. V, p. 313.

Digitized by Google

PLATE XI.

Some of the bones found in the Worlebury pits, during the first exploration, are deposited in the Public Museum, at Weston-super-mare, and the remainder in the Museum of the Somerset Archæological Society, in Taunton Castle. The former, together with the bones which were found during the recent exploration of the camp, have been submitted to Professor Alexander Macalister, of Cambridge, most of whose notes are embodied in those of the following passages which are distinguished by quotation-marks. It is to be regretted that permission was not accorded to send the latter also to be examined by an expert.

The old 'finds' will be described first; then, those of recent discovery.

Figs. 1a, 1b, 1c, 1d. Skull found on the 21st May, 1852. (See Ch. III, 17). "A very large, well-rounded, and 'well-filled' skull, not very thick, and with ankylosed sagittal suture. The frontal is high, well-rounded, and with fairly prominent brow-ridges. There had been a rather deep infra-glabellar sulcus, and a concave depression at the ophryon. The mid-parietal region is depressed into a median longitudinal groove in the region of the obelion. The temporal crests are distinct, and rise as high as the parietal eminence. There is a depression on the left parietal eminence; but it looks like a post-mortem injury. The occiput is capsular, with a strongly marked inion, and very distinct muscular crests. There is an ossicle in the left squamous suture, which is very low and flat. The left half of the atlas is ankylosed to the occiput. Length of skull, 183^{mm}, breadth, 143^{mm}, circumference, 530^{mm}." Breadth-index, ·781.

Figs. 2a, 2b, 2c, 2d. This skull belonged to the large skeleton found in the steened pit, on the 21st October, 1851. (See Ch. III, 18.) "This is a strongly marked male skull,—that of a muscular, adult man,—with prominent arched brow-ridges, and fairly large brain-capacity. The breadth-index is ·743: it is therefore dolichocephalic; and the large jaw-arches must have projected, and given to the face the character of prognathism. Between the very prominent brow-ridges there is a depressed glabella, above which the forehead is transversely depressed in the line of the ophryon. Above this, the frontal is rounded, and prominent in the line between the frontal eminences. There is a strongly marked temporal crest which, on the parietals, rose a little above the mid point of the parietal eminences. The sutures had all been open; and there were some large wormian bones in the lambdoidal. The mastoid process of the remaining temporal bone is of very large size; and all the other muscular crests are strongly marked. On the left parietal bone is a sword-cut,—a 'coward's blow,'—which had been delivered by the right arm of an assailant from behind. This has shorn obliquely the external table of the skull, into the diploë, and has cracked the inner table. The even edge is that of a continuous blade,—not the hack of an irregular axe. The jaw-arches are wide, and roomy enough for the large, much-worn teeth, of which all are perfect, except the second upper molar on the right side, which had been early shed,—its alveolus being filled. The palate is well-vaulted, deep, and the lower jaw massive. The greatest width across the alveoli, measured from a part on each side outside the teeth, is 65^{mm}: the space between the back of the last molar and the median incisor measures 55^{mm}. The measurements are:—greatest length, 187^{mm}; breadth, 139^{mm}; maximum horizontal circumference, 512^{mm}; lower jaw bigoniac, 103^{mm}; bicondylar, 106^{mm}; height of ramus, 82^{mm}; breadth, 34^{mm}; angle, 116°. From the large size, capacity, and contour, it was probably the skull of a man of large stature."

Figs. 3a, 3b, 3c, 3d. A skull from Worlebury, in the Taunton Museum. It is not known from which pit it came. It is gashed with seven sword-cuts. Length, 184^{mm}; breadth, 142^{mm}; breadth-index, ·771.

There is no record indicating where the following fragments were found.

"Top of skull of female, slightly dolichocephalic, rounded, 'well-filled,' with moderately smooth forehead, but rather low and narrow; sutures open, moderately simple; bones very thin; frontal sinus very small."

"Frontal, and part of right parietal bone, belonging to skull of adult male which must have presented the same characteristics of forehead as Fig. 2, viz., large arched brow-ridges, and rounded receding upper part. From the fragments of nasal bone which remain, the man must have had a fairly large bridge to his nose; but the projecting brow-ridge in the middle must have made the infra-glabellar sulcus very distinct. The sutures were moderately simple; the bones thin; and the frontal sinus fairly large."

"Fragment of frontal bone of adult male, showing somewhat of the same characters, but with a higher forehead, and less pronounced brow-ridge. The inner walls of the large frontal sinuses have been quite eroded. There is an oval depression in the upper part of the bone, on its outer surface; but it seems to be a post-humous deformation."

"Skull of male: fragments of the upper surface of parietal and frontal bones. It was a wider, flatter-topped skull than any of the others; but the bones are thicker, and the sutures were moderately complex. It must have been mesaticephalic,—not dolichocephalic."

"Frontal bone of female, rounded, low-browed, with small frontal sinuses, and not very strongly marked temporal crests. It was broken by two blows of a puncturing instrument, which struck it from before."

"Fragments of a male skull consisting of portions of a massive, but small, temporal bone, with thick mastoid process, a ridged alisphenoid, with a portion of the left parietal, showing a fairly long spheno-parietal suture."

"Upper and lower jaws. They belonged to a moderately large male skull,—probably of a middle-aged adult. The third molar on the right side of the lower jaw has been long shed, and the alveolus filled-up; but as the opposing crown of the upper molar is worn, it must have been functional for some time. The jaws were not very prominent: there is no alveolar prognathism; and the palate is narrow, and rather well-vaulted laterally, though flattish in front. There is a palatal trace of the pre-maxillo-maxillary suture. The teeth are all well-facetted, but not flat-ground. The chin-prominence is moderate."

Digitized by Google

"Upper and lower jaws. The former shows a palate of extraordinary width, shallow, prominently ridged, belonging to an adult male, with wide, large jaws, and long-fanged teeth. The lower jaw is also solid, wide, but not very deep, with high ramus, and moderate chin."

"Upper and lower jaws of small adult female, showing much-worn teeth; a very small chin-prominence, (the whole height at chin being 25mm); very low rami to the jaw; wide sigmoid notch; and a small, low, coronoid process. The palate was shallow, and not very wide."

"Lower jaw of adult male, with wide alveolar arch, and prominent chin. The angle is oblique and everted; the condyle small, and the ramus narrow. The whole dental set has been perfect, except the left first molar, which has been shed long since. All the teeth have, however, fallen out, except two molars, and one pre-molar on the right side, which are very much ground, and flat-topped. The jaw belonged to a slight, but muscular male, with a sloping jaw, and a prominent chin."

"Another male jaw, heavier and larger than the last, with smaller angle, and more upright, higher ramus. It has strong muscular crests, and very flat-ground teeth."

"Femur of man whose skull is Fig. 2 on the plate. A strong, large bone, 47cm long, which must have belonged to a man of 5 ft. 10 ins. in height. The muscular crests are strong; and the linea aspera distinctly pilastered. The outer side of the thigh has a cut which has been made, probably, by axe-stroke from behind."

"Femur of strong male, very much curved, with long neck. Its length is 43·5cm; so it belonged to a man about 5 ft. 3 ins. in height. This is a very peculiarly shaped bone, with a large ectogluteal ridge, and a sharply prominent ridge above, and in front of the outer condyle."

"Femur: a long, smooth, slender bone, very slightly pilastered, as is the last, with the same flat ridging on the anterior and outer side of the shaft, below the great trochanter. This is a much lighter, and more slender bone; and belonged to a man of 5 ft. 5½ ins. in height."

"Right humerus: an extraordinary bone of great length and strength, measuring 37cm in length; and, according to the ordinary proportion, it should have belonged to a man of 6 ft. 4 ins. in height. The intercondylar width of this bone is 74mm."

"Lower end of right arm: also that of a muscular male; but it did not probably exceed 35cm. The man's stature was probably under 5 ft. 8 ins. The intercondylar width is 70mm."

"Portion of left humerus; belonging to another individual of smaller stature, but probably of strong frame. Too fragmentary to estimate exact stature; but certainly a male."

The following notes refer to bones found by the author in 1881.

"The bones of animals which have been submitted to me consist of fragments of ten species—horse, deer, ox, pig, a very small goat, badger, dog, otter, weasel, and water-vole." They occurred as follows:—

"The shaft of a human humerus, and two broken pieces of its head," deep in the rubbish of grand gateway.

"Head of humerus of goat, and first rib of red deer," in the ruin outside rampart, s. of grand gateway.

"Fragment of pelvis of goat (burnt); femur and last lumbar vertebra of badger; femur of young weasel; and calcaneum of sheep or goat," in the ruin at crest of inner rampart on s. side of keep.

"Lower jaw of water-vole (*arvicola amphibius*); portion of sacrum, eighth dorsal vertebra, and fragment of pelvis, of goat; right last upper molar of red deer; fragment of femur of deer; and fragments of tibia of goat," in the ruin outside inner rampart of keep, near 24 on Index-plan. "Most of these have been burnt."

"Bones of young sheep or goat, (probably the latter), vertebræ, ribs, phalanges of feet,—all, probably, from the same animal,"—among the stones over foot of earthen ramp, Pl. VI, figs. 12, 13 and 14.

"Fragment of tibia of old red deer," among the stones filling the passage-way of rectangular sheet of stones—20 on Index-plan.

"Lower end of right humerus, upper end of radius, fragments of middle of right radius, ossified cartilage of rib, and fragment of rib, of red deer; also fragment of lower end of humerus of pig," among stones of the spindle-shaped patch, Pl. VI, figs. 16 and 17.

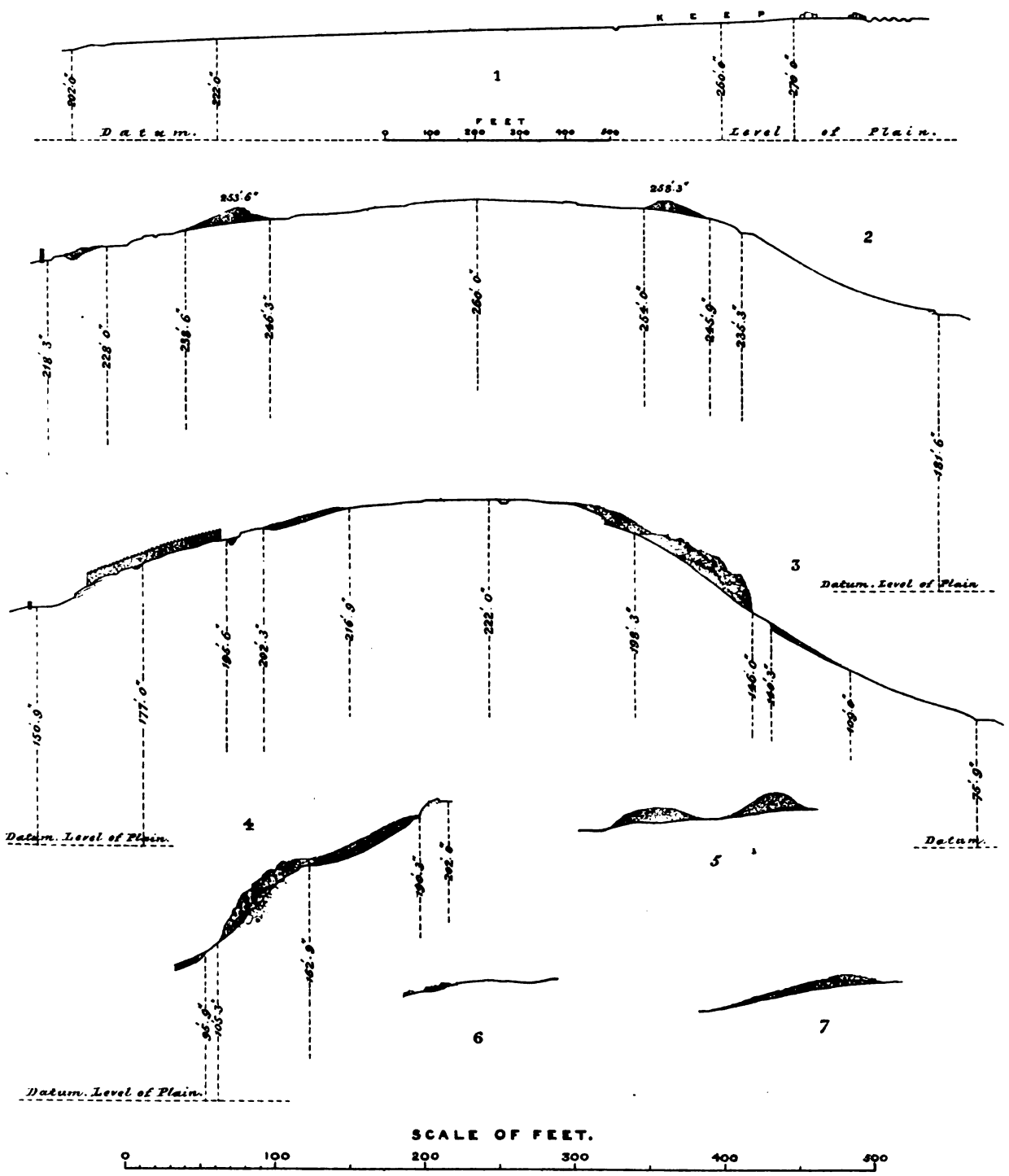
"The two halves of lower jaw of a small goat," in the *talus* of cliffs, below the line of the largest stones noticed in the description of fig. 15, Pl. VI.

"Sacral and dorsal vertebræ and ribs of goat or sheep, and radius of very small goat," among the stones in inner ditch of cattle-fold.

The following were all found in or near the works; but the notes of the exact spots have since been lost. "First phalanx (left-hand leg) of *bos* (*taurus ?*); fragments of other bones of oxen; teeth of horse, deer, and *bos*; third cervical vertebra of large red deer; part of jaw of young sheep; femur and vertebræ of otter; and portion of pelvis of deer. Most of the deer-bones have been burnt."

Digitized by Google

HILL SECTIONS.

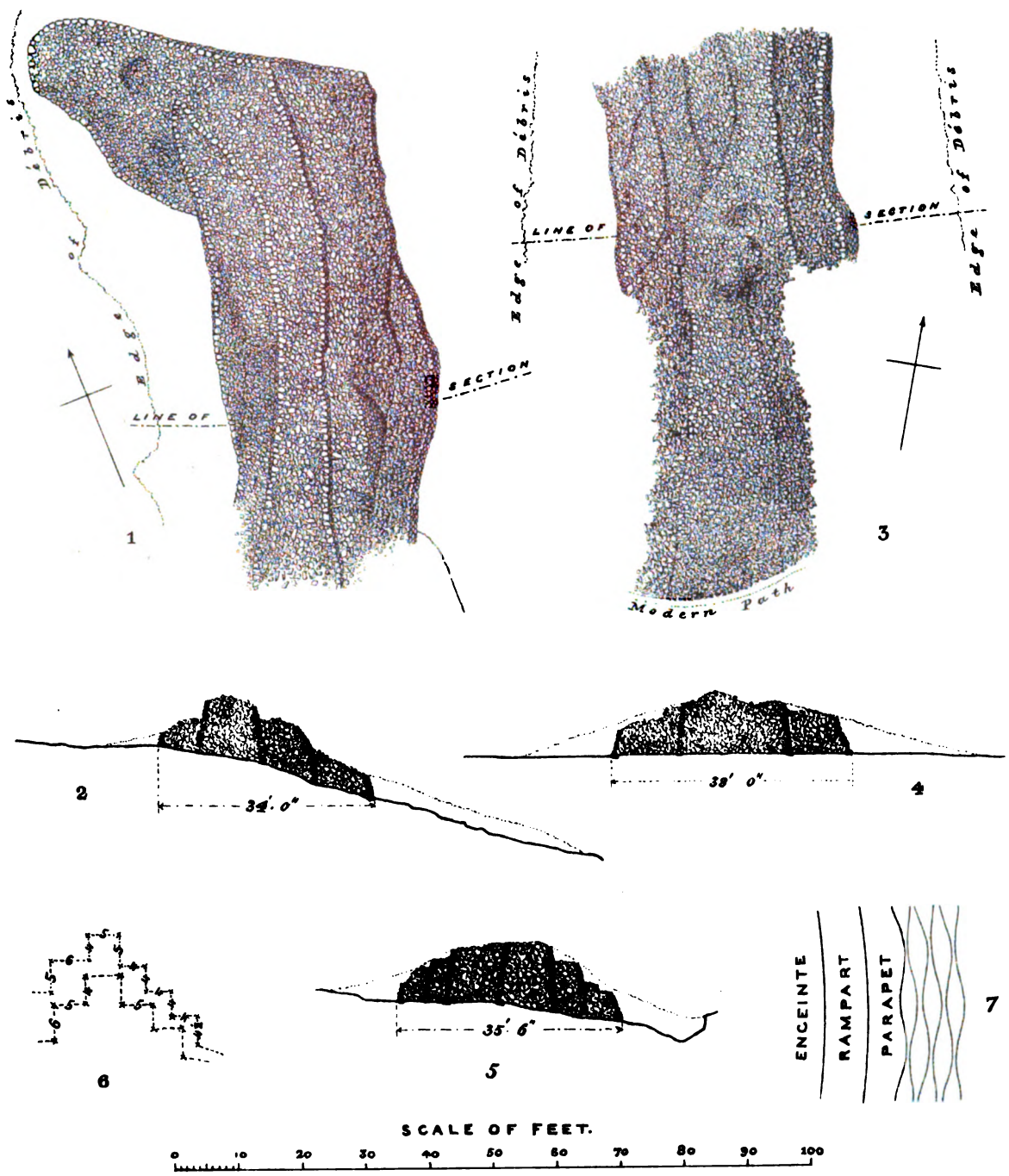


C.W.DYMOND, M.INST.C.E., F.S.A., DELT.

Digitized by Google

Digitized by Google

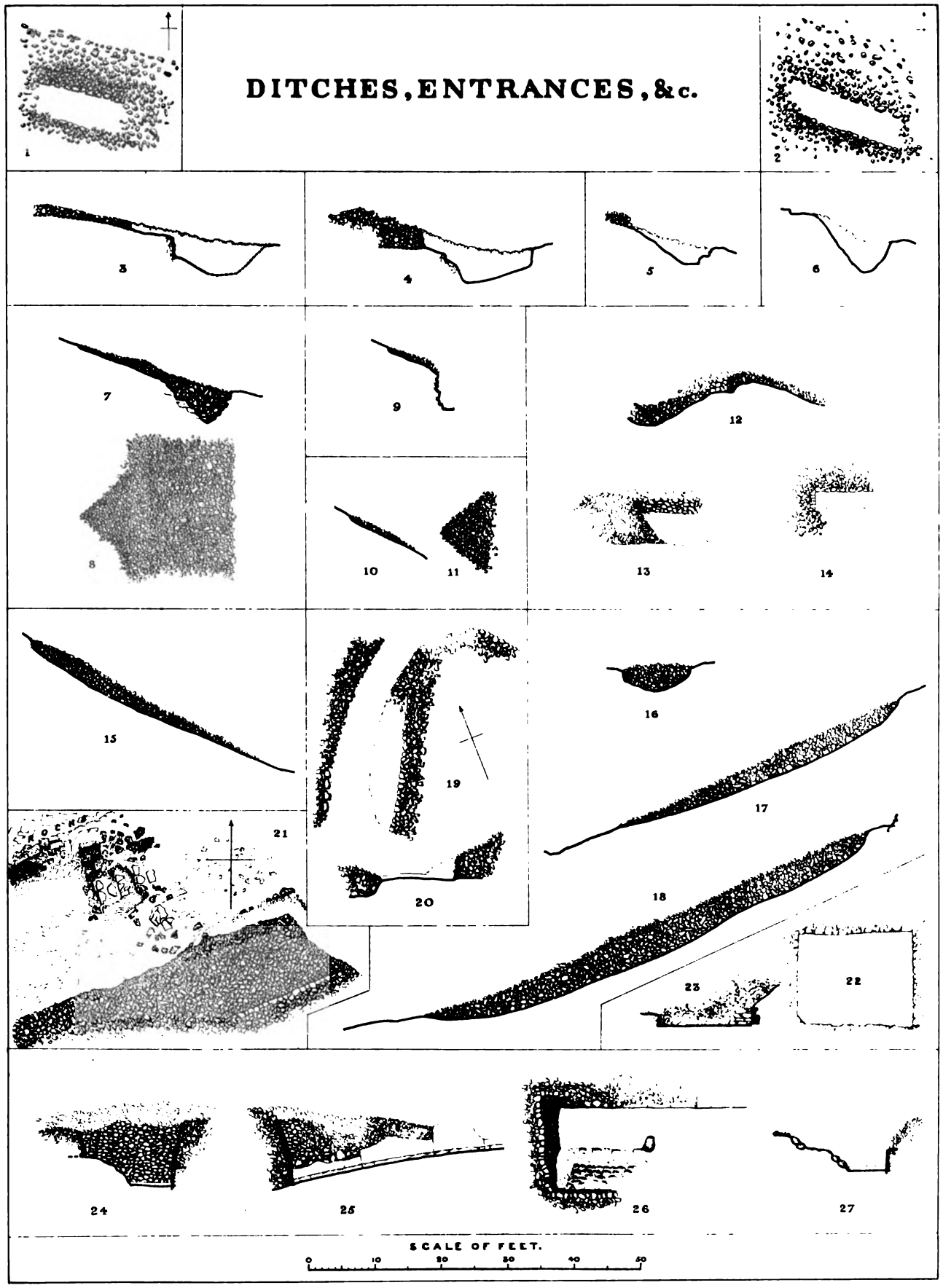
STRUCTURE OF WALLS.



C.W. DYMOND, M.INST.C.E., F.S.A., DEL.T.

Digitized by Google

Digitized by Google

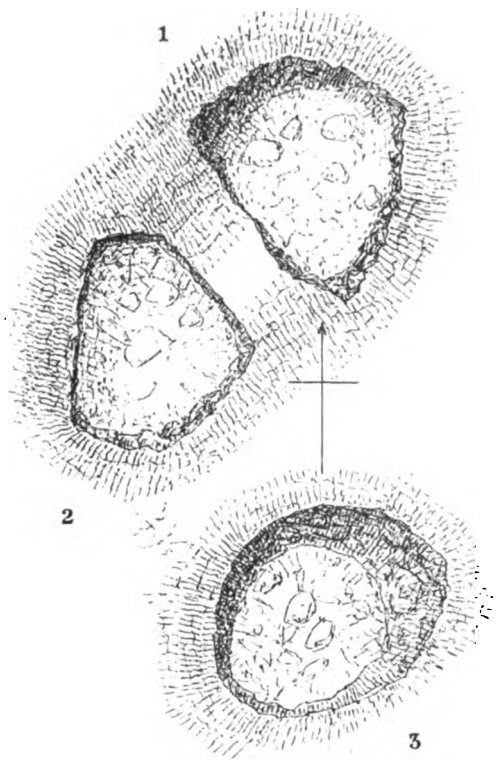


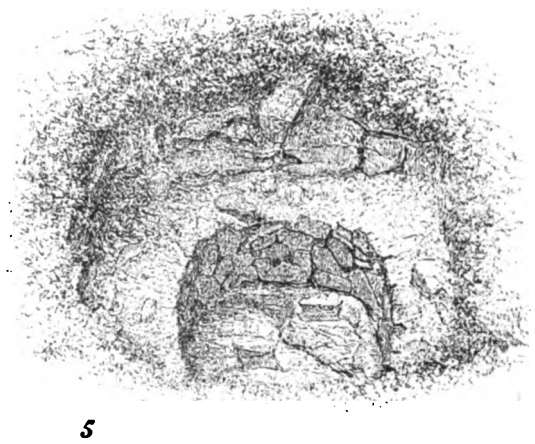
C.W. DYMOND, M.INST.C.E., F.S.A., DELT.

Digitized by Google

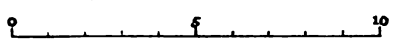
Digitized by Google

PITS.





SCALE OF FEET.



C.W.DYMOND, M.INST.C.E., F.S.A., DELT.

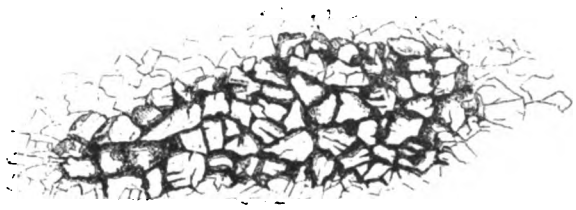
Digitized by Google

Digitized by Google

EXAMPLES OF WALLING.

1

2



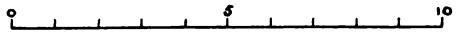
3

4

5

6

SCALE OF FEET.



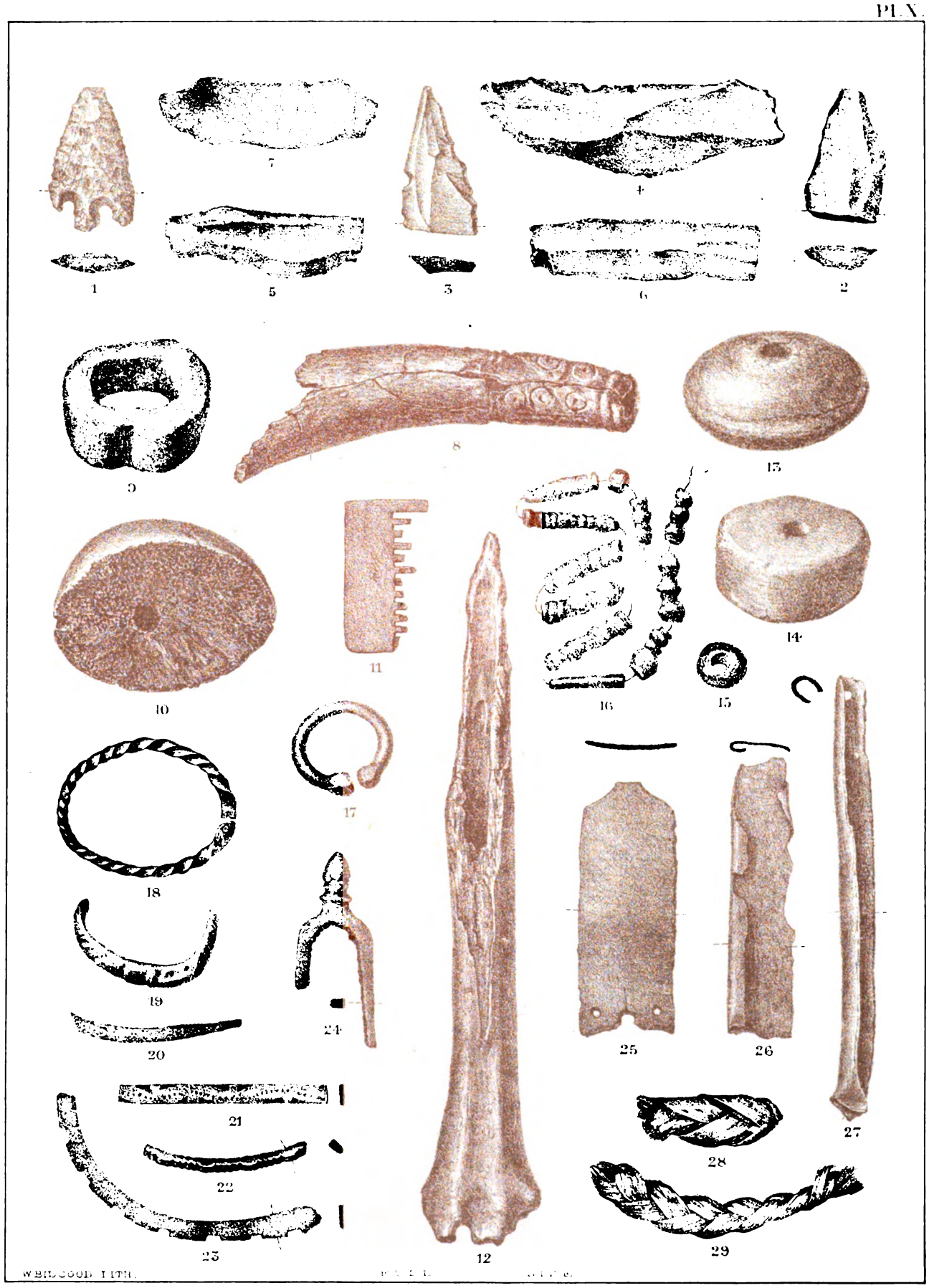
C.W. DYMOND, M.INST.C.E., F.S.A., DELT.

Digitized by Google

Digitized by Google

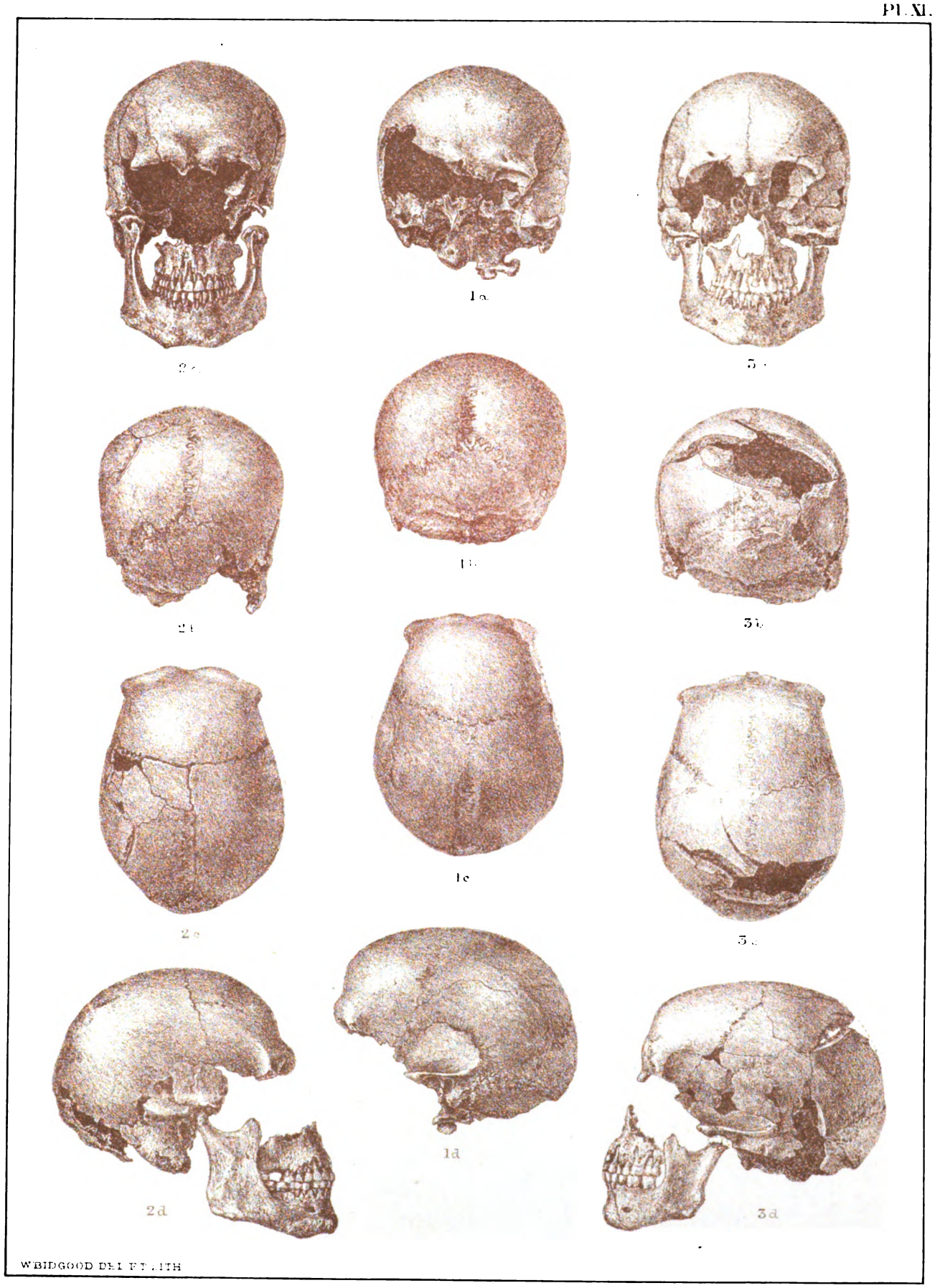
Digitized by Google

Digitized by Google



Digitized by Google

Digitized by Google



W BIDGOOD DEL ET LITH

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

Worlebury :
Widener Library
004695975
3 2044 081 398 091

Digitized by Google